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ABSTRACT

Part of a series of annotated bibliographies dealing with issues and problems raised by educators involved with population education programs, this publication addresses curriculum development in population education. Curriculum development is the most important component of a population education program, for it is through curriculum materials that learners receive population education messages. Entries are organized into six major parts: (1) Strategies for Curriculum Development in Population Education in the Formal Education System; (2) Strategies for Curriculum Development in Population Education in the Non-Formal Education System; (3) Development of Curriculum Materials in Specific Subject Areas; (4) State-of-the-Art on Curriculum Development in Asia and the Pacific; (5) National Experiences in Curriculum Development in Population Education; and (6) Evaluation and Research in Curriculum Development in Population Education. Countries dealt with in the entries include Asia, Bangladesh, India, Malaysia, Nepal, the Pacific Islands, Pakistan, the Philippines, the Republic of Korea, and Thailand. Subject and geographic indexes are provided. (RM)

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Curriculum Development in Population Education

Abstract-Bibliography

Series 6

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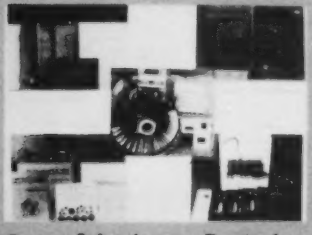
Curriculum Development in Population Education in the Formal Education System

Curriculum Development in Population Education in the Non-Formal Education System

Curriculum Development in Specific Subject Areas



State-of-the-Art on Curriculum Development in Population Education

National Experiences on Curriculum Development

Research and Evaluation in Curriculum Development

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INTRODUCTION

This issue is the sixth in a series of abstract-bibliographies dealing with issues and problems raised by population education workers who are undertaking population education programmes. This sixth volume is addressed to the issue of curriculum development in in-school and out-of-school population education programmes.

Curriculum development is the most important component of a population education programme. It is through the curriculum materials that learners receive population education messages. It is a potent tool for realizing the goal of population education – that is to effect the development of attitudes and behaviour that will make learners want to adopt fertility patterns in consonance with their own moral values and social responsibilities on their own accord and decision, when they become parents. On a general level, it is through the curriculum that education seeks to achieve the ultimate goal which is to help pupils develop self-direction and learn to contribute their share to national development.

Most countries with national population education programmes in the region consider population education as part of a total curriculum reform movement rather than a separate isolated curriculum activity. In the formal sector, countries have generally followed a more or less basic set of procedures for developing their curriculum materials. These procedures involve an identification of objectives of population education, developing a conceptual structure or body of knowledge of population concepts necessary to realize the goals and objectives set up; identifying entry or plug-in points in appropriate subjects by grade levels, developing a scope and sequence of population education contents, development of curricular materials, institutionalizing population education in the educational system and finally evaluating the curriculum materials. In the non-formal programmes, curriculum development places much more emphasis on the study of the profile, needs and problems of the learners or target users. For example, under this activity, three procedures are being followed: first, the profile, background problems and needs of the target audiences are identified; second, a job analysis is undertaken to find out the type of skills required by the learners to best perform some specific jobs; and last, a topical study is undertaken to determine what they still need to know. Once these baseline studies are conducted, the rest of the procedures more or less follow those of the curriculum being developed in the formal sector.

Despite these curriculum development efforts by the countries, institutionalizing population education into the systems has been a difficult task. Many reasons account for this. First, this is a subject through which not only some knowledge is to be imparted, but also new attitudes and values are to be inculcated. Most of these values are deemed controversial in nature. Second, the existing curricula at all school levels are already so overcrowded that it becomes very difficult to integrate population education content. A review of the population education curricula in

the region shows that they have been developed in great detail and often presented in an elaborate format. Nonetheless, it is a somewhat common experience that a detailed or elaborate, and often very ambitious, curriculum is not found easily acceptable to the persons or agencies looking after the total curricula at a given stage of schooling or education. The main reason is that the existing curriculum is already overcrowded. Consequently, the scrutiny of the educational materials, particularly the textbooks and the like, reveals that a population education curriculum is hardly reflected in them; and it often gets too thin to register any impact on the students. In the out-of-school sector population education messages tend to get lost or diluted in the transfer process because non-formal education, being part of the development process, places more emphasis on certain content areas.

This series addresses itself to this problem. It abstracts and review 70 publications which present the definition, nature and scope of curriculum development in population education, the guiding principles and procedural steps to be followed in curriculum development both in the formal and non-formal sectors; and the national experiences as well as the state-of-the-art on curriculum development programmes in Asia and the Pacific. These publications document how countries have instituted population education into their school curriculum, the problems encountered and the solutions formulated to resolve these problems. Most importantly, this volume attempts to show the changing direction and trends being followed by the countries from developing curriculum materials in either a very saturated or elaborate form or diluted and spread out too thinly to focusing on just a set of adequate minimum learning requirements designed to attain desired cognitive and behavioural outcomes at each grade level. The time span of publications is from 1969 to 1984. The publications which have been selected here are not curriculum materials but they describe the processes and experiences; and the theoretical as well as practical discussions of curriculum development. Some of these publications include lessons and actual curriculum materials to illustrate the discussions. These publications have been grouped into six parts:

Part One : Strategies for Curriculum Development In Population Education in the Formal Education System

Part Two : Strategies for Curriculum Development In Population Education in the Non-Formal Education System

Part Three : Development of Curriculum Materials in Specific Subject Areas

Part Four : State-of-the-Art on Curriculum Development In Population Education in Asia and the Pacific

Part Five : National Experiences on Curriculum Development in Population Education

Part Six : Research and Evaluation In Curriculum Development in Population Education

The classifications are not mutually exclusive. While Part One for example presents a general discussion on the theoretical considerations regarding curriculum development, some publications include some short descriptions of national experiences as illustrations. On the other hand, while Parts Four and Five highlight the efforts of specific countries in the region in developing their population education curriculum materials, some publications also carry some short general discussion on the theory and process of curriculum development. For each part, a review and synthesis of the literature is provided to enable the reader to get an overall view of that particular topic quickly, critically and authoritatively.

Under each classification, the entries or selections are arranged alphabetically by author, institution or other main entries within each classification. The general format includes a list of descriptors which are derived from the Unesco IBE and the Carolina Population Centre Thesauri and the addresses of the sources of these materials. The abstracts are lengthy enough to give the reader not only the main issues but also major ideas and conclusions arrived at. The majority of the publications are reports of meetings and workshops, research studies, monographs and articles.

PART ONE : STRATEGIES FOR CURRICULUM DEVELOPMENT IN POPULATION EDUCATION IN THE FORMAL EDUCATION SYSTEM

Part One: Strategies for Curriculum Development In Population Education in the Formal Education System: A Literature Review

This is basically a general discussion of the various considerations and strategies to look into before developing and introducing a population education curriculum into the school system. Consisting of 16 selections, the majority present a comprehensive treatment of the subject matter, starting with the rationale for developing a curriculum on population education in the school, proceeding to factors to consider in developing such a curriculum and finally enumerating the strategies or sequential steps for the actual development of such curriculum materials. However, a few selections have been written to zero in on one aspect of the whole range of considerations given for curriculum development. For example, one selection focuses only on approaches for introducing population education into the school curriculum, namely, separate course approach or infusion approach where population education concepts permeate the existing subjects, along with a discussion of the pros and cons of each. Another selection highlights the issue of the school level at which population education should be introduced – primary or secondary level? Two selections approach the subject matter by raising problematic issues encountered in developing curriculum materials in population education. Another two documents raise possible content areas that could consist a population education curriculum.

Generally, the documents start the discussion of the topic by first establishing the need and rationale for introducing population education into the school system. All the documents agree that the many problems brought about by rapid population growth are recognized by educators. Although these documents enumerate various measures to arrest fertility and reduce birth rate, they eventually focus on education as one of the most important tools. The school curriculum can effect the development of attitudes and ideals in school children. Education systems can make the kind of educational contribution that will prepare young people for future family roles. Once this need is established, the documents proceed to discuss various considerations to take into account when embarking on a population education curriculum programme. These include the following: (a) population policies and characteristics of the country's educational system; (b) definition of population education; (c) educational objectives; (d) educational experiences or contents to attain these set objectives; (e) approaches for integrating population education content into the school system; (f) strategy for implementation; (g) nature of the learner or age level at which different topics can be introduced; (h) school level at which population education can be introduced; and (i) preparedness of the instructional staff.

To demonstrate more concretely the process of curriculum development in population education, the documents present various sets of sequential steps or procedures. While many steps are common to them, some go more in-depth into the actual process of curriculum preparation while others chose to include adminis-

trative and institutional strategies to promote the integration of population education into the school curriculum. For example, one document describes only the three main processes of materials development, i.e., (a) identifying major concepts; (b) breaking down these major concepts into subconcepts; and (c) identifying behavioural, cognitive and affective objectives. The document prepared by the Unesco Regional Office for Education in Asia and the Pacific recommends the following steps: (a) formulating a set of objectives; (b) development of a conceptual structure and the organization of a body of knowledge or population concepts necessary to realize the goals and objectives of population education; (c) identifying plug-in points in appropriate subjects by grade levels; (d) sequencing of identified population education concepts by grade and subject (scope and sequence); (e) development of curricular materials for teachers and students; (f) institutionalizing population education into the general educational system; and (g) evaluation. Other documents include strategies beyond actual curriculum preparation such as establishing linkages between population education and current curricular revisions, training of teachers, mobilizing for curriculum change, studying not only the needs of the school children but also the problems and needs of society. The documents highlight the broad content areas that should comprise a population education curriculum. The documents enumerate various types of integration; namely, infusion of population education concepts into the content of an existing course; introducing it as a mini-lesson or teaching unit in textbooks; as a separate, unified course; and the integration of population education into the school curriculum through a massive curriculum reform.

The content areas included: (a) population or demographic data; (b) human reproduction; (c) population and family planning policies and programmes; (d) family size and quality of life; and (e) population growth and its effects on urbanization, environment, social and economic development. There has been much debate and discussion with regard to the school level at which population education should be introduced. Those who argue for introducing it into the primary level give the following reasons: (a) there is a high dropout rate after grade V or VI; (b) the biggest enrolment is at this level; (c) children develop attitudes early and are already inquisitive and exposed to matters of sex at an early age; (d) pupils from low-income groups, where the tendency is towards big families, make up the bulk of the elementary schools pupils; (e) many are eligible for marriage before they leave elementary school; and (f) there are more teachers at the elementary level who can be tapped to teach population education. Those who argue for introducing population education at secondary level say: (a) the complexity and controversial character of materials for population education requires a certain level of maturity to understand them; (b) it is the high school graduates who will dominate society's future leaders; (c) the dropouts can be taken care of by out-of-school youth educators; and (d) students at the secondary level are closer to the age of marriage.

SCHOOL LEVEL AT WHICH POPULATION EDUCATION SHOULD BE INTRODUCED

01

Chauls, Donald. "Population education should be introduced first at the primary rather than the secondary school level – a sociological approach", *The Journal of Family Welfare* 19(2): 29-35, December 1972.

Those who advocate that population education be introduced first at the primary level are, in effect, assuming that primary school students (who will not continue their education) are more likely to remain in the local community and – being graduates of the highest level of education which their village has to offer – are likely to be its future leaders. On the other hand, those who advocate an initial emphasis on secondary level population education are assuming that secondary students of village origin, although they are likely to move to urban areas, will nevertheless continue to influence village attitudes and behaviour with respect to population. These people, in effect, view the process of social change as occurring on an urban-to-rural, better-to-less educated continuum, and feel that it is presently necessary to concentrate on the urban, better-educated end of the continuum. Which of these arguments is morely likely to be correct? Can studies of the processes of social change shed light on this problem in order to assist educational decision-makers?

The paper presents three theories of social change which will help illuminate these discussions. First are the externalistic theories of social change which view change as being introduced, of necessity, from outside a given socio-cultural system; theories of social change as being inherent within the system; second are the change agents from outside the system who are the original innovators, or the introducers (externalistic), of the new ideas and behaviours to a small portion of the village; and third are the marginal elite who will serve as the early adopters of the new ideas and behaviours, altering them to fit into the culture of the village and then spreading them throughout the village.

School population education programmes can aim either at the original innovators or at the early adopters. The level (as well as content) of the two programmes would differ considerably. Specifically: (a) a school population education programme at the secondary school level is a means to reach the original innovators of new population ideas and behaviour; its content would be oriented towards providing a broad view of the population situation plus a recognition of the students' potential leadership role in producing population change; (b) a school population education programme at the village primary school level – and especially in the higher grades of primary school – is a means to reach the early adopters of new population ideas and behaviour; its content would be family- and community-oriented.

It would be preferable to develop a population education programme at both the primary and secondary school levels. However, where faced with funding and personnel limitations, it is argued that greater emphasis should be placed on the introduction of population education at the upper levels of primary school. The major reason for this conclusion is the overriding importance of reaching the village's early adopters.

Descriptors: *Social Factors; Educational Levels*

Source: Family Planning Association of India
Bajaj Bhavan
Nariman Point, Bombay 400021
India

EMPHASIS ON LEARNING PROCESS

02

Davis, Russel G. "Curriculum development in population education: a note on missing components", in: Kline, David and David Harman. ed. *Issues in population education.* Lexington, Mass., Lexington Books, 1976, p. 149-185.

The aim of this article is to improve curriculum materials in population education by placing a major emphasis on structuring demographic and economic content so as to attain transfer of learning through problem-solving and discovery learning. In the conceptualization and implementation of a population education curriculum, success is dependent on how information transmission and transfer of learning; discovery learning and problem-solving; moral learning; and activity and experimental reinforcement are inter woven to form a creative unity.

Population education syllabuses, textbooks and instructional materials seem to stop at the level of information transmission and make scant mention of the need to teach for transfer. The curriculum designer must structure information so that transfer is accomplished and this means that generalizations are transmitted along the pre-designed links or stages toward application. This structuring should take learners from the knowledge that there is a problem of population/resource imbalance to a resolve that they can and should do something about the problem. Problem-solving and discovery learning are necessary in population education if the objective is to lift the enterprise above the mere transmission of facts. The article then presents four steps in structuring curriculum materials.

If population curricula are developed so that the learner perceives that there is a problem, is provided with means for attempting solutions and has acquired a sense of efficacy that he can effect solutions, then the final goal seems to be developing a sense that the learner should apply the solutions to his own life and conduct. This brings the curriculum designer to the problem of handling ethical values or moral considerations; and this is one of the features that should distinguish population education from other seemingly related subjects in the curriculum, such as "objective" treatment of reproductive biology or a "factual" presentation of economic or demographic facts. One model which can be used for injecting moral education into population education is the Kohlber model where moral education consists of helping the child, youth and adult move through stages toward successively higher-order moral reasoning. Finally, in the last stage, the learning gained by the students should be applied in actual life.

Application can be undertaken in many ways. Students can also be more directly involved in their communities by helping to reduce the effects on families of excessive fertility and scant resources. There are many opportunities for projects, based in the school or out in the community that deal with population-related activities. They can be involved

directly in problems through field trips and project preparation in ecological and social development. The student may also, very early on, be directly involved in the problem as an individual, as he faces the effects of early marriage and high fertility on career planning and educational and vocational opportunity. In summary the four stages can be seen as a unified activity following a pattern: (a) establishing that there is a problem of population/resource balance (information); (b) establishing that something can be done about the problem (transfer); (c) establishing that the individual learner himself can do something about it (transfer); (d) establishing that the individual should do something about it (moral learning); and (e) hopefully this sequence ends in action in which the individual does something about the problem and this in turn reinforces his disposition to act in subsequent situations (reinforcement).

Descriptors: *Information Transfer; Problem Solving; Discovery Learning; Moral Education*

Source: Lexington Books
D.C. Heath and Company
125 Spring Street
Lexington, Mass 02173
U.S.A.

THEORETICAL BASIS OF POPULATION EDUCATION

03

Jacobson, Willard J. *Population education: a knowledge base.* New York, Teachers College, Columbia University, 1979. 267p.

Population issues, like most areas of public concern, do not fall neatly into one of the instructional areas around which school curricula are currently organized. Furthermore, the knowledge base for the cognitive aspect of the curriculum development process normally available for established areas has not been systematically developed for this field. This book is designed to provide the curriculum developers and the teacher with a single systematic formulation of the knowledge base for the population education programme. It has been written primarily for teachers of science and social studies at the middle and junior high school levels and the suggestions for classroom activities are in general geared for students and teachers at these levels. The knowledge base presented in this book has been drawn from mathematics, philosophy, the humanities and many of the natural and social sciences.

Chapter One presents the relationship between population and education, definitions, goals and assumptions of population education and the different steps for undertaking inquiry approach in teaching or learning population education. Chapter Two focuses on the demographic concepts: population size, births and death rates, migration, population growth rate, projections and predictions, age structure of populations, world population growth, population distribution, how population grows and human population growth pattern. Chapter Three defines what population regulation means in terms of the physical, biological and social systems. Then it focuses on population regulation in animal and human populations. Chapter Four discusses the issue of family and population. Under this chapter, the following topics are discussed: the family, human reproduction, birth control and contraceptive methods, social factors that influence family size, young people and their futures and family planning and the different kinds of public population

policies. Chapter Five focuses on the issue of population and space to live highlighting the following topics: crowding, population density versus population size, population density and social stress, the concept of "open space" and how people want to live. Chapter Six discusses the inter-relationships between population and their environments by presenting discussion on the natural ecosystem, modern farming systems, cities and industrialized urban systems, the global systems, impact of population growth and the optimum levels of population. Chapter Seven shows the relationship between population and resources. The following are the resources taken up in this chapter which affect and are affected by population increase: food, materials and life styles, energy and standards of living, and the application of universal laws. Finally, Chapter Eight shows how values affect the study of population and education. It presents definitions of various terms and discusses the various approaches to evaluation. As a practical exercise, for the use of values clarification, this chapter takes up the following issues for discussion: Should population control be imposed? Should young people be taught birth control? *Survival: a question of responsibility and the "right" to self-location:* this volume not only provides a source book for background information on problems associated with population but also gives practical suggestions for teaching. Among these practical suggestions are analogues designed to help relate abstract ideas to more concrete familiar situations and the "role imaginings" that permit consideration of controversial issues in the way that others may view them. Throughout, these practical suggestions are indicated by distinctive type.

Descriptors: *Resource Materials; Secondary Grades, Science Education; Social Science Education*

Source: Teachers College Press
1234 Amsterdam Avenue
New York, N.Y. 10027
U.S.A.

POPULATION EDUCATION CONTRIBUTES TO EDUCATIONAL INNOVATION

04

Jayasuriya, J.E. *Curriculum innovation through population education.* Colombo, Associated Educational Publishers, 1978. 119 p.

The purpose of the book is to provide some insights into the introduction of population education an area of study where content and methodologies have undoubted educational and social relevance into the curriculum.

Chapter One traces the origins and development of population education starting from 1941 when Alva Myrdal in her book "Nation and Family" emphasized the essential role of education in the development of a new population policy and in 1943, an article in Social Education set out the case for inclusion of population issues in the social studies curriculum of the secondary schools. In 1962, population education was reborn with the publication of Warren Thompson and Philip Hauser's articles that called for schools to incorporate population content. After these milestones, the United Nations Declaration of Population issued by the

Secretary General of the United Nations on Human Rights Day and the Unesco mandate on population education finally developed a fully fledged population education programme for the world. Chapter Two presents a view of education as a backdrop against which the goals and nature of the proposed field of study may be examined; a concise account of the more significant attempts to state a case for population education; and what might hopefully be a comprehensive and a new perspective. Chapter Three presents the scope and content of population education. It first differentiates population education with family life education, sex education and environmental education. Then it provides a content outline of a course in population education. Finally, on the basis of this outline, it stresses that every population education programme should develop a conceptual structure. Chapter Four analyses the many problems and issues that arise with the introduction of a new subject such as population education. These problems deal with issues in programme development such as creating a climate of acceptance for population education and establishing good controls and programme management. They also concern problems that have to do with pedagogical issues such as what stage to introduce population education, which strategy or mode of integration is the most appropriate: the separate unit, or the infusion approach. Chapter Five discusses the various teaching methodologies that can be used to effectively teach population education. This chapter however, focuses more on presenting the various steps in undertaking the values clarification and problem-solving approach and discourages the readers from using the discovery-oriented approaches. Chapter Six identifies the various innovative contributions that population education has introduced into the general education curriculum. It serves as a catalyst for the promotion of inter-disciplinarity; it emphasizes problem analysis and explores more than any other curricula the inter-relationships among social phenomena. It develops the realization of the inter-dependence of human beings and the inter-relationships between man and his environment; and lastly it encourages the development of three types of skills among the students, namely, clarifying values, planning and decision-making and problem-solving. Chapter Seven discusses why the field of research is very weak in population education and identifies areas requiring more research. The meagre output of research in the Asian region is explained by stating that the programme's efforts were largely concentrated on curriculum development and teacher training; both of which were quite stupendous tasks in themselves. Finally Chapter Eight calls for a halt to the ever-increasing fragmentation of education and to subsume at least a fair number of the many different kinds of education under a single heading such as "Current problems".

Descriptors: *General Discussion; Values Clarification; Teaching Methods; Course Contents*

Source: Associated Educational Publishers
P.O. Box 603
Colombo, Sri Lanka

FORMULATING A DYNAMIC STRUCTURE FOR POPULATION EDUCATION

05

Lane, Mary Turner and Ralph E. Wileman. *A structure for population education: goals, generalizations, and behavioral*

objectives. Revised edition. Chapel Hill, North Carolina, Carolina Population Center, 1978. 119 p.

This book has been written to assist anyone who wants to learn about, teach, or plan curricula for population education. It identifies a structure that educators can use for first graders or for high school students. The structure has been developed on the following definition of population education: population education is not just demography or sex education or population statistics or family life education. It incorporates all of these three areas in a more dynamic structure. It is the study of human population and how it affects and is affected by several aspects of life: physical, social, cultural, political, economic and ecological.

Chapter One identifies briefly the population phenomenon and the need to study it. Chapter Two gives the elements of the structure: goals, generalizations and behavioural objectives. The goals of population education are to develop understandings and attitudes about the following: (a) basic population and demographic terms; (b) human reproduction and family planning; (c) family size and standards of living; (d) population and the environment; (e) population and the economy; (f) population policies and programmes in other countries; and (g) the growing personal and collective effect of the population phenomenon. To achieve these goals, there must be a clear statement of the main ideas or generalizations that contribute to meeting the goals. For example, if one goal is to develop understandings and attitudes about the effects of population and the economy, what major generalizations are needed for this study? What essential understandings or generalizations should direct the teacher's planning and the student's learning in the exploration of population and economy? To illustrate this, the book presents several generalizations under each of the stated goals. In addition to the generalizations, it is also important to observe whether the learner has arrived at the generalizations – that the learner has developed some cognitive gains and attitudinal changes. There is therefore a need to state the behavioural objectives to describe observable cognitive learning. Each behavioural objective in this structure has two characteristics: (a) behaviour; and (b) criterion measures. Behaviour tells what the learner does to demonstrate his learning. Criterion measures tell teachers and learners about quantity, quality and time considerations related to evaluating the products of behaviour. They generally tell educators how much time or how little, how well and how fast the learner is expected to respond. Some behavioural objectives included in this structure also include a third characteristic -- conditions. Conditions are the givens, such as a map, a guide, a table or a set of instruments that a learner has when he is asked to perform a task. To illustrate this, the book presents a list of behavioural objectives. For each generalization, there could be almost an infinite number of objectives that would provide evidence of learner mastery of the generalizations. Chapter Three suggests ways teachers can use this structure in planning courses they are already teaching or in new courses. This chapter is not on how to teach about population because there are already many excellent methods books that deal with effective teaching and learning. This structure helps the teacher bridge the gap between information about population and teaching about population by focusing on goals, significant ideas and objectives for the learner. The appendices of this book are such an integral part of concern for population education that in some ways they should probably be identified as Chapter Four. The appendices are

organized to provide annotated and reviewed materials for the teacher and for the learner, a bibliography of significant readings on population and descriptions of population agencies and population education centres, and an annotated listing of additional instructional materials.

Descriptors: *Structure of Knowledge; Educational Goals; Educational Objectives*

Source: Carolina Population Center
University of North Carolina at Chapel Hill
University Square 300-A
Chapel Hill, N.C. 27514
U.S.A.

APPROACHES IN INTRODUCING POPULATION EDUCATION

06

Lawton, Dennis. "Population education and curriculum planning," in: Lawton, Dennis, ed. *Population education and the younger generation.* London, International Planned Parenthood Federation, 1971, p. 8-12.

There is general agreement that schools ought to encourage greater awareness of personal, national and international problems connected with population and reproduction. There are two approaches by which schools can introduce population education into the curriculum. The first approach sees population and family planning education as part of a new subject for which room should be made on the time-table of human ecology. The second approach is to ensure that the required teaching is done by means of subjects already included in the curriculum – such as science, geography and history.

The single unified subject enables one to plan a carefully constructed, coherent and sequential syllabus; avoid unnecessary overlapping and repetition; allows one teacher to take the responsibility to plan the course. The disadvantages of this approach are that the curriculum is already overcrowded and there are few teachers available who could, with confidence, deal with the variety of knowledge which this kind of course demands.

The infusion with existing subjects of population education concepts means that no major curriculum reorganization is necessary; existing subjects are used and the time-table need not be disturbed and existing teachers can be used with little re-training. Disadvantages include the danger of fragmentation of the programme and the consequent failure of the pupils to attain the kind of understanding that the programme requires and it is much easier to see "integration" on paper than it is to achieve it in the reality of the school situation.

Which of the two approaches to adopt depends on the kinds of teachers available, facilities which exist for re-training teachers and the cost of adapting existing teaching materials.

Descriptors: *Integration Approach*

Source: IPPF
18-20 Lower Regent Street
London SW1Y 4PW
England

HOW TO INCORPORATE POPULATION EDUCATION INTO SCHOOL PROGRAMMES

07

Metha, T.S. "Curriculum development for population education," in: India. National Council of Educational Research

and Training. Population Education Cell. *Population education: selected readings*. New Delhi, 1972, p. 101-112.

Increased population growth is responsible for retarding economic progress of India and is adversely affecting the health and well-being of the younger generation. In order to effect any change in the growth rate of the population, the future parents from this most important segment of society must be involved. Their changed attitude towards family size is vital. Population education through the school system could be a potent instrument for developing these attitudes and competencies to take rational decisions. In developing curriculum materials for population education, the following basic questions should be asked: (a) what educational purposes should the school seek to attain through the introduction of population education as an integral part of the school programme?; (b) what educational experiences can be provided that are likely to attain these objectives?; (c) how can these experiences be effectively organised?; (d) what should be the strategy of implementation of this change?

There are two important steps involved in the formulation of goals for population education. The first is a critical study of the existing curricula in the school. The second step would be the clarification of the concept of population education and to develop a point of view suited to the needs of the country and in tune with the prevailing school programme. The article then proceeds to describe the various definitions of population education as formulated by countries like India, Malaysia, Korea, Thailand and a Unesco-sponsored seminar in Bangkok. The next step which covers the selection of suitable educational experiences that are likely to attain the objectives set forth entails identification of concepts, information and facts relevant to population problems, population dynamics and its effects on the life of the people. Because of the very nature of objectives laid down for population education, it must draw for its content upon the various disciplines. Although selection of contents should be unique to a country, the article presents the major content areas that the following countries have set up for their population education programmes: India, Malaysia, Korea, Thailand. To sum up – by and large – the accepted major elements of population education are: (a) determinants of population growth; (b) demography; (c) consequences of population growth; (d) human reproduction; (e) family planning policies and programmes. An issue that has caused a lot of discussion in some of the countries of the Asian region is whether sex education forms or does not form a part of population education. The next sequential step in the process of curriculum development would be the preparation of instructional materials for the use of teachers and students. These may come in the forms of textbooks, handbooks, teaching quides, supplementary materials and audio-visual aids. The question on how to incorporate population education in the school programme is still an open one though several national and international seminars have favoured the fusion of population education concept through the entire school programme, wherever they are educationally relevant and appropriate.

Descriptors: *General Discussion; Integration Approach; Educational Objectives; Course Contents*

Source: Population Education Unit
National Council of Educational Research and Training
Sri Aurobindo Marg
New Delhi 110016
India

PROCEDURES FOR DEVELOPING POPULATION EDUCATION CURRICULUM

08

Mehta, T.S. "Developing population education curriculum", in: India. National Council of Educational Research and Training. *Readings in population education.* New Delhi, 1969, p. 57-61.

The article describes the problems brought about by rapid population increase and how educational institutions can help in solving them. It is through the curriculum that education seeks to achieve the ultimate goal which is to help the pupils develop self-direction and learn to contribute their share in national development. Unfortunately, curriculum material in population education is scant. In developing curriculum materials for population education, the following questions should be answered: (a) what educational objectives should the school seek to attain; (b) what educational experiences can be provided that are likely to attain these purposes; (c) how can these educational experiences be effectively organized; (d) how can we determine whether these purposes are being attained? After these questions are answered, the following procedures can be undertaken to develop the curriculum materials: (a) conducting a status study to determine what is being taught with regard to population problem, health and family education under various school subjects. This will mean analysing the existing syllabi in social studies, geography, economics, health education and general science; (b) clarification of the concept of population education and developing a point of view with regard to socio-economic needs and the direction the country is taking for its planned growth in order to identify some major social values that may have relevance for the introduction of population education in the school curriculum; (c) the selection of content which means identifying some major understandings, concepts and information and facts relevant to population education; (d) preparation of instructional materials in the form of textbooks, handbooks, supplementary reading materials, audio-visual aids, etc.; (e) the materials should be systematically field-tested before the final shape is given to them; (f) teacher preparation – it is the teacher who has to use these materials, create learning situations in the classroom for his pupils and help them to learn; (g) developing a strategy of implementation by the adoption or adaption of the material by the States and incorporating it into the various appropriate school subjects; and (h) curriculum revision.

Descriptors: *General Discussion; Educational Objectives; Content Areas; Curriculum Development Strategies*

Source: Population Education Unit
National Council of Educational Research and Training
Sri Aurobindo Marg
New Delhi 110016
India

CURRICULUM DEVELOPMENT STRATEGIES

09

Paik, Hyun Ki. "Curriculum development in population education", in:

Pakistan. National Institute of Education. *Population education.* Islamabad, 1974, p. 11-14.

The promotion of population education at all levels of educational institutions is one tool for tackling the problem of rapid population growth. Education being a formal agency for transmitting new ideas to the young generation, becomes imperative to create an awareness and understanding in the children and youth about the population situation and its consequences through organized education. There is no simple universal definition of population education except in the general sense that it is the curriculum dealing with population studies. Curriculum development is a complex task in which several processess are involved. The following basic questions have to be answered first when developing a curriculum: (a) what knowledge base for curriculum development has to be built up that is likely to provide the baseline data from which content of population education can be drawn?; (b) what are the objectives of population education in the schools and colleges?; (c) what content can be selected from knowledge base to attain these objectives?; (d) what would be the modes of inclusion of population education content into the school curricula?; (e) what should be the strategy involved in instructional materials development and programme implementation? Because population education is a new field, a systematic body of knowledge in population education is not readily available to curriculum writers. One approach to meet this problem is to assemble and organize the concepts and data which are available through the co-operative efforts of various scholars in different disciplines. Explicit goals are necessary to guide learning. There are two important steps involved in the formulation of goals and objectives of population education. The first is a critical study of the curricula which are existing in the country. This means an analysis of draft curriculum syllabi or textbooks used in various subject areas. The second step would be the clarification of the concept of population education in relation to population issues and the development of a point of view suited to the needs of the country and in tune with the prevailing school programme.

Examination of the draft curricula of social studies, mathematics, science, health education and home economics reveals that all of these subject fields involve population studies to greater or lesser extent. Based on the extent of its content treatment, it is necessary to make decisions as to the approaches for incorporating population education into its various subject fields. The next sequential step in the process of curriculum development would be the preparation of instructional materials for the use of teachers and students. These may take the forms of curricula, syllabuses, textbooks, teachers' guides, student's workbooks and supplementary reading materials.

Descriptors: *General Discussion; Curriculum Development Strategies*

Source: National Institute of Education
Ministry of Education
Islamabad, Pakistan

INTEGRATION APPROACH FOR POPULATION EDUCATION PROGRAMMES

10

Rao, D. Gopal. "Developing curriculum for population education," in: Rao, D. Gopal. *Population education: a*

guide to curriculum and teacher education. New Delhi, Sterling Publishers, 1974, p. 48-76.

Because India is faced with problems arising from an enormous increase in population, the task of education is to help the growing children to meet the challenges and demands which arise from this; therefore population education should be introduced as an integral part of education. Population education is not a study of demography only nor is it contraceptive education or a propaganda medium for the family planning programme. It is rather primarily concerned with the well-being of the individuals and society. Whether to introduce population education in the school curricula as a separate subject or part of some other related subject matter is one of the dilemmas in the approach of integration. This problem can be explained by the fact that the existing curriculum is already overcrowded and that the subject matter of population education cuts across several disciplines. The best way is to identify the concepts that should be introduced in population education and to examine each concept carefully with a view to determining the curricular areas through which they can be integrated. Modern research in the field of curriculum has indicated that concepts can be the basis for developing curricula and conceptualization facilitates learning. In population education, a conceptual model has been developed with the following criteria: (a) the curriculum should be flexible and adaptable to meet varied and changing situations; (b) the approach to curriculum development should be conceptual so that the component parts would not be subject to frequent revisions; (c) each of the fundamental concepts included in the model should be suitable for instruction at any grade level; and (d) the curriculum should take into account factors such as the needs and interests of children, and of the family, community and nation.

The causes of population growth, and its consequences; as well as the need for population control, are three key concepts which form the basis for organizing the elements of the curriculum. Each of these concepts are substantiated by further analysis of the major concepts into sub-concepts. They provide a basis for the selection of desired behavioural objectives. The goals of population education are stated in terms of three domains: cognitive, affective and behaviour. The cognitive domain includes those objectives which deal with recall or recognition of knowledge and the development of intellectual abilities and skills. The affective domain includes those objectives which describe changes in interests, attitudes, values and the development of appreciations and adequate adjustments. The behaviour domain includes that population behaviour in which the individual applies his knowledge and expresses his attitudes towards a problem or situation pertaining to population.

The article discusses at more length the different approaches for integrating population education into the school curriculum. At the elementary stage, the integrated approach seems to be more meaningful and comparatively easy because the same teacher teaches different subjects to the same grade. At the secondary level, this approach becomes more complicated. The article describes two effective methods of teaching population education: through the problem-solving approach and through "learning by doing."

Descriptors: *General Discussion; Integration Approach; Educational Objectives*

Source: Sterling Publishers PVT Ltd.
Jullundur 3
New Delhi 110016
India

INTERLOCKING STEPS IN CURRICULUM DEVELOPMENT

11

Rao, D. Gopal. "Development of curriculum on population education: a few considerations," in: Kuppuswamy, B. and others, ed. *Population education: a panel discussion.* Bangalore, Institute for Social and Psychological Research, 1971, p. 117-123.

This article raises several considerations in developing a population education curriculum. In recent definitions of curriculum, the emphasis has changed from what is taught to the child in the classroom to the total environment in which education takes place. It is not so much the mastery of the subject matter which is regarded as determining the growth, as the active reaction of the individual to his environment.

Curriculum development, to be effective, involves a number of interlocking steps: (a) educational leaders feel that their work would be more effective if the move to change the curricula came from parents, business and professional people and the general public. This principle especially applies to curricular changes that deal with population education; (b) curriculum change requires the co-operation of a large number of people if it is to be successful and effective; (c) a study of the social problems that confront the people in their everyday living, such as, the role of mechanization in economic life, or conflicts and stresses in family, forms a legitimate base to curriculum planning; (d) curriculum planning must be based on knowledge of how children grow and learn, the awareness of their basic needs, concerns, characteristics, motivation and ambitions and also on the conditions required for the learning to be effective; (e) objectives should be formulated; (f) the subject matter and activities must relate to the age and growth level of the child, his interest and needs and his home environment; (g) in planning the courses, the teaching units must be arranged in logical sequence and in a psychological sequence, bearing upon the maturation level of children; (h) the most effective means of launching a new programme is by its integration in the in-service training of teachers and supervisors who are already trained. Auxialiary measures might include: (i) publicising the new programme in the press; (ii) mobilizing community organizations such as PTAs and (iii) encouraging parents and others to visit the classes and to judge for themselves the impact of the programme.

Descriptors: *General Discussion; Curriculum Development Strategies; Educational Objectives; Course Content; Evaluation*

Source: Institute for Social and Psychological Research
Bangalore, Karnataka
India

TYPES OF INTEGRATION STRATEGIES

12

Soriano, Liceria Briliantes. "The integration of population education in the school curriculum", in: Elevazo, A.O., and others. *Population education: a matter of urgency.* Quezon City [1971], p. 26-31.

The paper enumerates various measures in order to arrest fertility and reduce the birth rate. It focuses on education as one of the most important tools in effecting the development of attitudes and ideals that will guide the school children, when they reach parenthood, to adopt a fertility pattern in consonance with their own moral values and social responsibilities.

The writer suggests four methods for introducing population education into the curriculum. It can take the form of specific teaching units used on a daily or weekly basis; it may be infused into existing courses; it could be introduced through massive curriculum reform, but because of the constraints of a lack of specialists and experts this would be impractical; or it can be integrated into disciplines such as history, anthropology, sociology, economics and psychology.

Descriptors: *Integration Approach; Content Analysis; Curriculum Development Strategies*

Source: Population Education Programme
Ministry of Education, Culture and Sports
Palacio del Governador on Aduana Street
Intramuros, Manila
Philippines

STEPS FOR RENOVATING THE CURRICULUM THROUGH POPULATION EDUCATION

13

Unesco. Regional Office for Education in Asia and the Pacific. *Curricular renovation through population education.* A paper prepared for a Seminar-Workshop on the Development of Curriculum in Population Education in Nepal, May 1981. Bangkok, 1981. 17 p.

This article focuses on how population education can contribute to the renovation of a country's school curriculum. The extent of curricular renovation possible through population education depends on what is perceived as the nature, goal and role of population education vis-a-vis the philosophical, sociological, psychological and pedagogical bases of the total school curriculum. It then discusses the different procedural steps for renovating the curriculum through population education.

The first step involves defining the goals of population education. There are certain criteria that ought to be considered in formulating a set of objectives. The objectives should be stated in terms of outcomes rather than activities; be explicit and precise and describe the results which would constitute the achievement of the objectives in terms which are verifiable; include cognitive and affective learning and be mutually consistent. Then the paper presents an example of a set of objectives in population education which meet these criteria. These sample objectives take into consideration both the learner's cognitive and affective domains. The second step entails the development of a conceptual structure of the organization of a body of knowledge or population concepts necessary to realize the goals and objectives of population education. This is not a simple case of enumerating demographic and population concepts but more important is the organization of such content in a logical scheme. For example, under the objective: "to develop an understanding of basic demographic concepts and measurements", the following topics can be taken up: census, population

survey, population at micro- and macro-levels, fertility, growth rate, natural increase, demographic transition and zero population growth. In addition to a set of population education concepts, generalizations of varying complexity need to be formulated for each population concept and sub-concept. The paper includes an example on this. These sub-concepts and sub-generalizations will acquire added meaning if the specific objectives and population concepts by grade-level are also identified. This is also called scope and sequence where the concepts are given first, followed by sub-concepts, objectives and placement in the grade levels.

The third step involves identifying plug-in points in appropriate subjects by grade level. To ensure logical integration requires two prerequisites, namely; (i) full grasp of the different population concepts to be integrated; and (ii) a thorough knowledge of the content coverage or scope and sequence of the discipline to be enriched. As this has been done in Step 2, Step 3 is devoted to examining the content of existing school subjects to determine which would lend itself to enrichment through the addition of relevant population concepts. There are three main approaches for introducing population education, namely, infusion, integration and as a separate subject. Step 4 sequences the identified population education concepts by grade and subject. An example is given to illustrate how a scope and sequence is developed. The scope and sequence is called spiral curriculum because the learner returns to familiar ideas and concepts, but presented through alternative examples and at a higher level. Step 5 involves the development of curricular materials for teachers and students. In elaborating the conceptual framework in population education, it is also important to formulate the learning experiences, teaching strategies, teaching aids and/or instructional materials that should be used. Step 6 aims for institutionalizing population education into the general educational system, whereby at some future time, population education would no longer be needed as a separate activity as it would eventually become genuinely integrated into the total educational effort of the country. One way of achieving this is for the curricular materials in population education to be wholly integrated in the total school curriculum, the prescribed textbooks and in the other learning materials used in the educational system. Finally, Step 7 involves the evaluation of the curricular materials in population whereby one measures the impact of the curricular materials on the learner's knowledge, attitudes and behaviour.

Descriptors: *General Discussion; Curricular Renovation; Course Content; Scope and Sequence*

Source: Population Education Clearing House
Unesco Regional Office for Education in Asia and the Pacific
P.O. Box 1425, General Post Office
Bangkok 10500, Thailand

PROCESSES IN CURRICULUM DEVELOPMENT

14

Unesco. Regional Office for Education in Asia and the Pacific. *Curriculum development for population education*, by T.S. Mehta. Bangkok, 1974. 10 p. (Population education documents. Reprint series no. D.6).

Population education is one potent instrument for reaching the younger generation who will become the future parents of tomorrow. Population education will develop the youth attitudes and competencies to make rational decisions. The school population education programme should be a part of a comprehensive approach and not remain in isolation; it should cover the total stage and not a part of it only. The curriculum of population education may differ from place to place, and from culture to culture. It needs to be in tune with the overall national goals of education in order to become an integral part of the total school programme.

In developing the curriculum, four steps can be followed. The first is to formulate the objectives. To do this, a critical study of the present curricula should be undertaken first. This will provide the background and the inherent objectives of the school programmes and also some ideas as to what could be done within the existing framework of the school curricula. The second step is to make a clarification of the concept of population education and the development of a point of view suited to the needs of the country and in tune with the prevailing school programme. The second step is to select the content that will bring about these objectives. This means the identification of concepts, information and facts relevant to population problems, population dynamics and their effects on the life of the people, the nation and the world. Because of the nature of the objectives of population education, it must draw for its content upon the relevant concepts from academic disciplines such as demography, economics, civics, sociology, health education, and biology. Core concepts relevant to population education would form an outline of the course content to be incorporated in the total school programme. For incorporation, it would be necessary that the course be properly articulated and graded according to the suitability of concepts and information for different levels of school education. An issue that has caused much discussion in some countries is whether sex education forms or does not form a part of population education.

The next step is the preparation of instructional materials for the use of teachers and students. This may take the form of textbooks, handbooks for teachers, supplementary reading materials or audio-visual aids such as charts and films. In the production of these materials, it will be advisable to involve different types of experts ranging from subject specialists, methods specialists, writers, artists and audio-visual experts. The fourth step is to incorporate population education into the school curriculum. This can be done by infusing population education concepts into various appropriate subjects offering a separate special course on population education. Arguments given in favour of infusion are that the curriculum is already overcrowded and children will learn better if they are confronted with relevant population materials throughout their entire period of schooling. With regard to the second approach, it is claimed that the imparting of population education is so crucial to the welfare of humanity that it should be given the status of a "compulsory subject".

Descriptors: *General Discussion; Curriculum Development Strategies; Integration Approach*

Source: Population Education Clearing House
Unesco Regional Office for Education in Asia and the Pacific
P.O. Box 1425, General Post Office
Bangkok 10500, Thailand

PROBLEMS IN INTRODUCING POPULATION EDUCATION INTO THE SCHOOL CURRICULUM

15

Unesco. Regional Office for Education in Asia and the Pacific. *Population education and the school curriculum*, by J.E. Jayasuriya. Bangkok, 1972. 11 p. (Population education document. Reproduction series no. D.1).

From whatever angle one looks at it, rapid population growth presents an issue of momentous significance and no educational programme can ignore it. For some time past, a few educators have been forcefully arguing the case for the inclusion of population studies in the curriculum and in 1970, a number of countries in Asia established population education programmes in the schools.

Population education has been defined differently by various authorities in the field. These terminologies include sex education, family life education, population education, population awareness and population and family life education. With regard to content, the author identifies five broad areas under which population education content may fall. These include the collection and analysis of population data, population growth and human development, the problems of urbanization, psycho-social aspects of human sexuality or the reproductive process and population planning. The objective of a course is to give the learner an insight into the totality of issues connected with population, ranging from nature, measurement, causes, determinants and consequences of population growth as well as of urbanization both at the micro level and macro level and the possibilities of planning family size and population growth. Hopefully, the acquisition of this insight will provide the learner with a sound cognitive and attitudinal basis for sound decision-making with regard to his future population-related behaviour.

There are a number of problems connected with the introduction of population education in schools. Population education contains many controversial topics such as sex education – which would not be readily accepted by many parents – and for which the students may not be ready. Any attempt to force certain topics on which parents have reservations would endanger the entire programme.

The preparation of teachers should be comprehensive, and it should include all elements of population education, to enable teachers to handle population education materials with accuracy and confidence. The advantage of introducing population education at the primary level is that more pupils can be reached at the primary level because many drop out of school before they reach the secondary level. Furthermore, the primary school curriculum provides a great deal of flexibility for the introduction of new material. On the other hand, curricular materials are easier to prepare for the secondary level and is much more meaningful because the students are just a few years away from decision-making with regard to marriage and reproduction.

The best method is to introduce population-related materials through

various subject areas, both at the primary and secondary levels, but with more subjects in the secondary level. In the last year of the secondary school, a single unified course of short duration may be given with the end in view of synthesizing all the learning acquired the previous years. Research done so far to unravel this motivational basis is quite inadequate and a great deal of further work is needed. Since there is a shortage of personnel to undertake such studies, teachers can also handle data gathering given suitable training.

Descriptor: *General Discussion; Integration Approach*

Source: Population Education Clearing House
Unesco Regional Office for Education in Asia and the Pacific
P.O. Box 1425, General Post Office
Bangkok 10500, Thailand

DIFFICULTIES IN INTEGRATING POPULATION EDUCATION INTO THE SCHOOL SYSTEM

16

Unesco. Regional Office for Education in Asia and the Pacific. *Problems and strategies for curriculum development in population education.* A paper presented to the Group Training Course in Population Education, Bangkok, 14 July to 15 August 1975. 12 p. (Population education documents. Reprint series no. III, D. 12).

Family planning programmes have been started in most countries in Asia and the Pacific but they have not shown equally good results in all the countries because of factors including the lack of education of the people, problems of communication, social and religious preferences, low economic status and lack of any social security system. A combination of various methods of population control are needed to solve the problem and among them education of the future parents and adults is the most potent one. A number of countries have introduced population education into their school curriculum. Two trends had been the inter-disciplinary and social-issues oriented integration. In almost all the developing countries in the Asian region, curriculum is organized around generally accepted disciplines such as biology, physics, chemistry, geography, civics and mathematics. In developed countries, the curriculum is organized around social issues. The paper then presents eight problematic areas which need to be considered while framing the curriculum in population education. These include the nature of the learner, nature of population education, inclusion of population education in the school curriculum, stage at which population education should be introduced, development of instructional and learning materials, evaluation, system of education and instructional staff.

Even if there are many conflicting theories about how children learn, or what they are able to learn at different maturity levels, a theoretical framework is needed to define which characteristics of teachers, students, instructional materials or institutions, make for differences in student learning. Population education being a new area – and controversial – has no commonly agreed upon definition and goals. There are also differences in the content and methodology of teaching. Population education has been misunderstood for sex education or family planning, which it is not. However, both might be included in the content of the programme. Population

education is a process by which the students investigate and explore the interactions between population and their environment, population characteristics, the nature and meaning of the process, and the consequences of population growth on the quality of life.

Being a new field, there are many points about which scholars disagree, one of which refers to whether to include sex education or small family norms in the curriculum. The basic content, concepts and the modes of treatment of content in population education are unique to each country because of the differences in culture, values, knowledge base and attitudes. Therefore, the curriculum in population education should be developed keeping in mind the national and cultural needs of each country. The inclusion of population education in the school curriculum can be done either through infusion into the existing curricula or as a separate subject. The paper presents the pros and cons of each approach.

There is also no agreement on the stage at which population education should be introduced. Some argue that it should be introduced at the elementary or primary stage, others that it should be introduced at the secondary level. The pros and cons for introducing population education at different levels are further discussed in the paper. Instructional materials should be developed according to the existing pattern of the curriculum so that there is no problem of immediate infusion. Packages of instructional materials, textbooks, teachers' guides, of student manuals should be developed involving the teachers intensively. Population education by nature is difficult to evaluate. Population education deals more with the affective than the cognitive domain. Because of lack of a theoretical framework, population education is difficult to evaluate. The system of education determines to a great extent the degree to which any innovation can be absorbed. In countries where school education is centralized and rigid, the problems of curriculum innovation are real.

Descriptors: *General Discussion; Curriculum Development Strategies*

Source: Population Education Clearing House
Unesco Regional Office for Education in Asia and the Pacific
P.O. Box 1425, General Post Office
Bangkok 10500, Thailand

PART TWO : STRATEGIES FOR CURRICULUM DEVELOPMENT IN POPULATION EDUCATION IN THE NON-FORMAL EDUCATION SYSTEM

Part Two: Strategies for Curriculum Development In Population Education in the Non-Formal Education System: A Literature Review

Seven selections are abstracted in this section. Five of the seven documents present both the guiding theoretical principles and procedural steps for developing curriculum materials on population education in the out-of-school sector while the other two documents considered only the guiding principles. Two of these selections differentiate between procedures for developing curriculum materials and instructional/motivational materials on population education.

While most of the documents include a rationalization of the inclusion of population education concepts in out-of-school programmes, one also presents a strong attempt to convince family planning workers that even though the ultimate responsibility for school curricula is in the hands of the professional educators, family planning specialists should also give attention to the school curricula in their activities. The paper identified training, motivation, information-giving and adult education as activities in family planning into which population education can be appropriately integrated.

Because population education and curriculum development have generally been identified with in-school activities, one document differentiates between curriculum development on population education in the in-school and out-of-school sectors by describing the nature and scope of out-of-school population education. Practitioners in the field feel that the term 'curriculum' is more suited to the formal education institutions and thus they prefer to use the term 'programme', partly because it provides more variables in practice than does the curriculum. It also has other distinctive features which differentiate it from the in-school sector. First, it is problem-centred and people-centred. It is based on the needs and interests of the people it serves. Secondly, it is considered both as a dynamic and continuous process. It is flexible enough to accommodate new facts and new ideas relevant to the situations to provide for lifelong learning. Lastly, it is a participatory process. It calls for joint action by an interdisciplinary group such as programme personnel and staff of other government, semi-government and voluntary organizations having development programmes

The four documents which enumerated the procedural steps in developing an out-of-school population education curriculum showed some varying degree of sophistication from the simplest to the most complete sets of procedural steps. For example, one document enumerates six steps directly relevant only to the preparation of the curriculum. These include the following: (a) situation analysis and problem identification; (b) defining educational objectives; (c) elaborating content areas; (d) identification of teaching methods and learning experiences; (e) sequencing learning units and developing prototype curricular materials for trial; and (f) evaluating trial results and reconsideration of curriculum for adoption.

Another document presents more elaboration of some of the steps. For example, under the previously mentioned situation analysis, two sub-steps are

further given such as analysis of the situation and interpretation of the data. Under the step "elaborating content areas", this particular document included more detailed steps such as identifying the content areas of the discipline where population education concepts can be integrated; identifying the population education concepts that could be integrated in the non-formal education programmes; identifying natural entry points for introducing population education concepts and drafting the integrated curriculum contents.

A more broad-based strategy for curriculum development is given by another document that includes institutional linkages and administrative approaches. These include the following: (a) identifying the various institutions engaged in out-of-school population education for sources of information; (b) identifying the profile, background and needs of the target audiences; (c) undertaking a job analysis to find out the type of skills required by the trainees to best perform some specific jobs; (d) undertaking a topic study to determine what the audience already know, think and believe about the topic and what do they still need to know; (e) preparing the curriculum materials; (f) pre-testing the curriculum materials; (g) disseminating the materials to the target users; (h) undertaking another evaluation or post-test of the materials; and (i) developing action research or feedback mechanism to ensure continuity of feedback and revisions. While the first two sets of procedural steps are content-oriented, the last set is more user-oriented. It calls for a more in-depth analysis of the users and their needs to serve as a benchmark for curriculum development.

In addition to these procedural steps, three documents enumerate three different sets of theoretical and guiding principles that should be taken into account when developing a curriculum for out-of-school population education. Among these three sets of guiding principles, the following commonalities emerged: (a) emphasis on the needs, problems and characteristics of the target users; (b) emphasis on the immediate relevance to the felt needs of the participants; and (c) relevance to national development goals and local conditions. The rest which stand out as unique on their own include the following: (a) The curriculum should be flexible; (b) it should make use of available local resources; and (c) its development should be a continuous process, interdisciplinary and participatory. The third set of guiding principles is distinctly different in the sense that it calls for more radical and long-range changes. It requires that the substance and method used must be viewed in attitudinal terms; the content must be able to institute social changes and must help to generate a new sense of social values. Furthermore, the methodologies must be conducive to any teaching/learning situation and the content must answer the educational concerns of adult life.

The last issue tackled in two selections are the approaches for integrating population education into development programmes. Three approaches are mentioned, namely the separate unit approach, infusion approach, and core learning kit approach. In the first approach, a separate unit course on population education is developed and made an integral part of the curriculum of an ongoing development programme. When using the infusion approach the practitioner identifies relevant population education concepts and the plug-in points in various development pro-

grammes where these concepts can be meaningfully integrated; selects and sequences appropriate learning units; and prepares detailed textual and audio-visual materials. The core-learning kit approach differs from the separate unit course and infusion strategies in the sense that it neither advocates the infusion of population education concepts into other disciplines nor does it form a unit within any other discipline. Instead, the documents claim that the advocates of this approach identify common areas of relevant population education concepts, translate them into a series of learning activities and prepare appropriate teaching-learning materials.

CURRICULUM DEVELOPMENT FOR NONSCHOOL POPULATION FOCUSES ON AUDIENCE SPECIFICITY AND PARTICIPATION

17

Harman, David. "Curriculum development for nonschool population," in: Kline, David and David Harman, ed. *Issues in population education*. Lexington, Mass., Lexington Books, 1976, p. 173-185.

The development of curricula for out-of-school adult education programmes has generally proceeded along traditional lines of selection of material, sequencing of the chosen material, production and finally evaluation. The potential for success of such undertaking depends to a large extent on the way in which the materials are selected and presented to learners.

This article raises some principles which are relevant to the success of curriculum development in out-of-school population education. One of the major fallacies in developing a curriculum for illiterate adults is a lack of consideration for their particular situation. Two typical approaches are those anchored in the systematic instruction of the letters of the alphabet together with their associated sounds, and those based upon analysis of words or phrases and the learning of their various components. However, neither of these methods of instructions takes cognizance of differences between populations. Progressive education recognizes that the individual differences of children dictate a need for differentiated education; an education that stems from an awareness of such differences and is programmed accordingly. In the same way specific programmes need to be developed and planned for each and every separate target group of illiterate adults. This requires the development of ways and means of gathering the desired information regarding target groups. Curricula should also be planned to be of functional use and immediate relevance to the participants.

Participation in adult learning is usually voluntary. Such attendance requires of the participant a difficult commitment as programmes are conducted as additions to, rather than in lieu of regular daily activities. Participation can be maintained only while participants see that the content and approaches have relevance to their felt needs. The basic difference between this and many other programmes is that here the functional content is derived from the participants rather than from preconceived notions of programme initiators as to what should be functional.

The third principle discussed in this paper relates to the relative significance of instructional methodology as opposed to content in the curriculum development process. Formalized frontal teaching techniques based on teacher dissertation and student passivity which are typical of much of instruction in schools in developing countries conflict severely with the more relaxes non-formal nature of extant and known patterns of learning. Lecturing is a poor substitute for informal discussion in areas in which long association of members of peer groups make peer group discussion the accepted mode of learning. The author suggests the following steps or processes for curriculum development: (a) survey the prospective target groups; (b) determine programme content on the basis of the survey; (c) choose instructional methodology, based on the survey; (d) design the organizational and administra-

tive aspect of a programme; (e) identify and select teachers who, themselves, then constitute a target population; and (f) design and produce materials for both participants and teachers.

Descriptors: *Adult Education; General Discussion; Teaching Methods; Curriculum Development Strategies; Conceptual Framework*

Source: Lexington Books
D.C. Heath and Company
125 Spring Street
Lexington, Mass. 02173
U.S.A.

GUIDELINES FOR CURRICULUM DEVELOPERS

18

Santiago, Antonio P. *Curriculum planning for population education.* [Nueva Ecija], Philippine Rural Reconstruction Movement, 1973. 13 p.

In curriculum development for population education, the following questions should be answered: What content should the curriculum offer? How should the content be integrated into the total way of life of the participants and at what levels? What is the soundest and most economical method of handling the content? What is the best way to involve the local people? What are the keys to creating content that will be self-generating, so that education goes on whether school keeps going or not? How long should direct agency involvement continue before the process of phasing out begins? And finally, what and how much content on population education is necessary/acceptable to the community in order to promote positive attitude towards family planning? Curriculum developers must bear in mind the following: curriculum for *whom* and curriculum for *what?*

Presented here are some guidelines for curriculum developers in population education. These include the following: (a) *the substance and method must be viewed in attitudinal terms* because more than the cognitive approach, the use of attitudinal approach serves as a mobilizer/motivator, organizer and trainer; (b) *the substance or content must be able to institute social changes* and this can be achieved by awareness of the felt needs of the people, simplifying the complexity of the change being introduced by basing the curriculum on the existing behaviour of the people and their educational level and understanding of the local environmental conditions; (c) *the substance or content must help generate new sense of social values;* (d) *the contents and methodology to be used must be conducive to any teaching-learning situation* – because population education is a sensitive and controversial topic and fundamental human value are dealt with here, the teaching approach should not be one-sided but should provide a pedagogically sound education presenting the pros and cons of relevant issues; (e) *the content must answer the educational concerns of adult life* which are classified as materialistic (refers to producing goals associated with agricultural and industrial enterprises or making a living) and non-materialistic (promotes personal creativity, group productivity and other human pursuits); (f) *the content of population education can only be developed by education specialist within each country.*

The tendency of some education specialists to rely heavily on the educational models and patterns of economically advanced countries may lead to the neglect of some basic and serious problems of

developing countries though the review of educational models and textbooks of other countries must not be discouraged. There are many factors that must be considered in the development of original materials. First of all, in the integration of population education content into the existing structure of the curriculum of the education system of a country, careful attention and study must be given to its existing syllabuses and instructional materials. Another consideration is the total appreciation and understanding of the social and educational context wherein population education content is to be introduced. Another factor that must be considered is the basic curriculum pattern and organizational structure of the education system of each country. Also, cultural values of a particular society must be taken into consideration on the choice of content to be included in any instructional programme. Finally, careful selection of subjects and terms must be taken into consideration. For example, while human sexuality is a basic area for education, in some countries it is not acceptable.

Descriptors: *General Discussion; Curriculum Planning; Social Values; Teaching Methods*

Source: Philippine Rural Reconstruction Movement
Nueva Ecija, Philippines

PROBLEM-CENTRED AND PEOPLE-CENTRED CURRICULUM DEVELOPMENT

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Unesco. Regional Office for Education in Asia and the Pacific. *Curriculum development for out-of-school population education.* A paper prepared for the Sub-Regional Group Training Course in Population Education, Bangkok, 1980. 15 p.

The terms curriculum and programme have been used interchangeably in the out-of-school sector. Practitioners in the field feel that the term curriculum is more suited to the formal education institutions and thus they prefer to use the term 'programme' partly because it contains more variables in practice than does 'curriculum'. Curriculum development for out-of-school educational programmes has many characteristics. First, it is problem-centred and people-centred. It is based on the needs and interests of the people it serves. Secondly, it is considered both a dynamic and continuous process. It is flexible enough to accommodate new facts and new ideas relevant to the situations to provide for lifelong learning. Third, it is a participatory process. It calls for a joint action of an interdisciplinary group such as programme personnel, staff of other government, semi-government and voluntary organizations having development programmes.

The following steps are followed in the curriculum development process: (1) situation analysis and problems identification; (2) defining educational objectives; (3) elaborating content areas; (4) identification of teaching methods and learning experiences; (5) sequencing learning units and developing prototype curricular materials for trial; and (6) evaluating trial results and reconsideration of curriculum for adoption.

Since out-of-school population education programmes have heterogeneous audiences such as farmers, housewives, out-of-school youth, industrial labourers, literacy teachers, social welfare workers, home economics extension workers or family planning workers, and their interests

and problems vary greatly, it is necessary to conduct a scientific survey of their demographic profile, interests and needs and socio-cultural conditions. However, these varied audiences can be grouped broadly into two categories, namely, professional workers and the general public. The curricular requirements for each of the two categories differ slightly. The types of training to be given to the professional workers include pre-service, induction and in-service which follow more or less the in-school development approaches, namely subject and infusion approaches. For the general public, the separate subject approach and the infusion approach may be applied interchangeably depending upon the nature of the training course/programmes.

There are various curricular approaches for integrating population education in development programmes. These include the following: (a) separate unit approach; (b) infusion approach; (c) core learning kit approach. Programme organizers following the separate unit approach generally developed a separate unit course on population education and made such unit an integral part of the curriculum of ongoing development programmes. This approach is mostly found in the training curriculum for field functionaries and in some cases, the teaching of out-of-school youth and adults. The infusion approach calls for three stages. Firstly, identification of relevant population education concepts and the plug-in points in various development programmes where these concepts can be meaningfully integrated. Secondly, the selection and sequence of appropriate learning units; and finally, the preparation of detailed textual and/or audio-visual materials. The core-learning kit approach differs from the separate unit course and infusion strategies in the sense that it neither advocates the infusion of population education concepts into other disciplines nor does it form a unit within any other discipline. Instead, the advocates of this approach identify common areas of interests and needs of various categories of target audiences, predetermine sets of relevant population education concepts, translate them into a series of learning activities and prepare appropriate teaching-learning materials. All of these materials are then compiled in the form of modules or guides referred to as "core learning kits". To illustrate these integration approaches, the article presents a few examples illustrating the integration of family planning/population education in development programmes such as agriculture, home economics and functional literacy.

Descriptors: *General Discussion; Integration Approach; Curriculum Development Strategies*

Source: Population Education Clearing House
Unesco Regional Office for Education in Asia and the Pacific
P.O. Box 1425, General Post Office
Bangkok 10500, Thailand

ACQUIRING SKILLS IN INTEGRATING POPULATION EDUCATION IN THE DEVELOPMENT PROGRAMMES

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Unesco. Regional Office for Education in Asia and the Pacific. *Development of curricular materials integrating population education in non-formal education programmes.* Report of a Regional Workshop, Los Baños, Philippines, 3-21 November 1980. Bangkok, 1980. 1 vol. (various pagings).

Participants at the Regional Workshop, organized by the Unesco Regional Office for Education in Asia and the Pacific exchanged experiences with regard to the development of curricular materials integrating population education in non-formal education programmes; acquired skills in the processes and methodologies of integrating population education in the various development programmes; and developed prototype curriculum and instructional materials for use in non-formal education programmes.

The first working session of the Regional Workshop was focused on the presentation of the country experiences on the planning and implementation of non-formal education programmes highlighting the development of curricular materials integrating population education. After sharing experiences, the participants formulated guidelines for the development of curricular materials. Before they did this, however, they attempted to provide common definitions to some crucial terms basic to curriculum development. These included: integrated curriculum, motivational materials, instructional materials and follow-up materials.

Two types of guidelines for the development of an integrated curriculum, one, procedural and the other operational were formulated by the participants. The procedural guidelines include the following: (a) analyse the situation; (b) analyse and interpret data; (c) formulate the curriculum objectives; (d) identify the content area of the discipline where population education could be integrated; (e) identify the population education concepts that could be integrated in the non-formal education programmes; (f) identify natural entry points for introducing population education concepts; (g) draft the integrated curriculum contents; (h) identify communication strategies/teaching methods and learning experiences; (i) identify evaluation/monitoring strategies and approaches; (j) draft the sample teaching-learning materials; (k) try out drafted sample teaching materials; (1) finalize the draft curriculum in the light of feedback.

The guiding principles for the development of an integrated curriculum were that an integrated curriculum should be (a) based on the needs/problems of the target audience; (b) suited to local conditions; (c) flexible enough to accommodate new developments and changes in situation; (d) relevant to the aspirations of the target audience; (e) a continuous process; (f) relevant to education objectives and national development goals; (g) interdisciplinary.

Guidelines to the development of materials included the need to: (a) identify profile and needs and interests of target group; (b) identify specific type and format of materials to be developed; (c) formulate the objectives; (d) determine the curriculum contents – prepare basic course outline; (e) write the first draft; (f) review the draft by a panel of experts; (g) revise the material in the light of the recommendations of the panel of experts; (h) translate the materials in the language of the target audience; (i) pre-test or try out the materials; (j) analyse and interpret the try-out materials; (k) revise in the light of results, if any; and (1) produce and distribute the materials. The reports of the participants with regard to materials development and samples of prototype curricula and sample instructional materials are included in the report.

Descriptors: *General Discussion; Materials Preparation; Instructional Materials*

Source: Population Education Clearing House
Unesco Regional Office for Education in Asia and the Pacific
P.O. Box 1425, General Post Office
Bangkok 10500, Thailand

TEN STEPS FOR MATERIALS DEVELOPMENT

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Unesco. Regional Office for Education in Asia and the Pacific. "Material production for out-of-school population education," in: *Population education: a source book on content and methodology*. Bangkok, 1980, p. 127-134. (Population Education Programme Service).

This article discusses a model which recommends a series of steps for developing materials for the out-of-school sector in population education.

Step 1: Identify the various sources, policies and information for out-of-school population education. These include national planning bodies, Government technical ministries, research institutions, international organizations or voluntary organizations. Step 2: Identify the profile and background of the audience. Survey the different target audience groups, their demographic profile, interests and their surroundings. This will enable the curriculum developers to produce materials that respond to the learners' needs. Step 3: Undertake a job analysis to find out the types of skills required to best perform specific jobs. This determines the skills and abilities possessed by the workers at a specific point in time and the skills necessary to perform the job with full efficiency. This becomes a component around which the materials could be produced. Step 4: The diversity of audience and the disciplines demands a thorough study of each topic on which the material will have to be developed in order to ensure the validity and reliability of the message. A topic study can be undertaken through interviews, discussion with subject specialists, study of the documents, field study or opinion study. The main purpose is to determine what the target audience already knows, thinks and believes about the topic and what they still need. Step 5: Produce prototype written and illustrated material. Step 6: Pre-test this prototype material with a representative sample audience on the following aspects before it is produced for general use: readability and understandability, accuracy and validity of subject matter, acceptance of visuals and physical layout. After pretesting, revise the material, produce in local languages on a large scale and distribute to the intended audiences. Step 8: Undertake another evaluation of the finished product called 'post test'.

Build in an action research component which will help to develop a feedback mechanism and thus establish a two-way communication system between script writers and the intended audience. Material production cannot be undertaken by a single expert. The material production team should consists of editor, general educationist who may be a social psychologist, linguist, subject specialist, artists, photographer and research person. The paper finally recommends that provision for funds and personnel should be made for organizing a material production team in all out-of-school population education programmes.

Descriptors: *Materials Preparation;*

Source: Population Education Clearing House
Unesco Regional Office for Education in Asia and the Pacific
P.O. Box 1425, General Post Office
Bangkok 10500, Thailand

PRACTICAL EXAMPLES OF STRATEGIES FOR INTEGRATING POPULATION EDUCATION IN DEVELOPMENT PROGRAMMES

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Unesco. Regional Office for Education in Asia and the Pacific. *Population education in non-formal education and development programmes; a manual for field-workers.* Bangkok, 1981. 260 p. (Population Education Programme Service).

This manual provides practical examples of strategies, approaches and materials for integrating population education into various development programmes. It deals with curriculum development in out-of-school population education; the nature and scope of out-of-school population education; programme development for out-of-school population education; the development of integrated learning materials; and programme evaluation. Only the chapter dealing with curriculum development and the development of integrated learning materials are abstracted here.

Curriculum development for out-of-school population education is a continuous, dynamic and participatory process following a general sequence of: (a) situational analysis and problem identification; (b) defining educational objectives; (c) elaborating content areas; (d) identifying teaching methods and learning experiences; (e) sequencing learning units and developing prototype curricular materials; and (f) interpreting try-out results and revising the curriculum materials. The experiences of some countries have shown that population education for the out-of-school becomes more meaningful and effective when integrated in on-going non-formal and development programmes. There are three types of approaches for integrating population education concepts into these programmes. One is the separate unit approach which calls for the development of a separate unit in population education and making this unit an integral part of the curriculum of an on-going development or non-formal education programme. The other is the infusion approach, wherein separate population education topics or concepts are infused in the related specific topics in the contents of the development programme. The third approach, the core learning kit approach, identifies common areas of interests and needs of various groups of target audiences, determines sets of relevant population education concepts and develops them into a series of learning activities and materials.

An integrated curriculum is defined as consisting of more than one discipline/area such as functional literacy, integrated rural development or integrated human resource development. The principles include the following: (a) an integrated curriculum should be based on the needs/problems and characteristics of the target audience; (b) it should be relevant to national development goals; (c) it should be suited to local conditions; (d) it should be flexible; (e) it should make use of available local resources; (f) its development should be a continuous process; (g) its development should be interdisciplinary and participatory.

The procedural guidelines in the development of integrated curriculum

include the following: (a) analysing the situation; (b) analysing and interpreting data; (c) formulating curriculum objectives; (d) determining the content of the non-formal programme where population education is to be integrated; (e) determining the population education content that could be integrated into the non-formal education programme; (f) identifying the entry plug-in points in the non-formal programme content for integrating population education content; (g) listing down the specific population education contents opposite or below the related programme contents; (h) identifying the teaching methods or learning activities that will achieve the objectives; (i) determining specific curriculum materials to be developed for selected contents and learning activities; (j) identifying evaluation means and developing instruments to determine the extent of achievement of the objectives; and (k) developing the selected curricular materials. To illustrate all of these guidelines, the manual includes a number of sample curriculum syllabuses, courses, motivational and instructional materials showing how population education concepts are integrated into the various development programmes such as nutrition, agriculture and health.

Descriptors: *General Discussion; Integrated Rural Development; Literacy Education; Instructional Materials*

Source: Population Education Clearing House
Unesco Regional Office for Education in Asia and the Pacific
P.O. Box 1425, General Post Office
Bangkok 10500, Thailand

DIFFERENTIATING BETWEEN POPULATION EDUCATION AND FAMILY PLANNING EDUCATION

23

Wayland, Sloan R. *Integration of population and family planning education into curricula of grade schools, secondary schools, medical schools and universities.* Prepared for presentation at IPPF-SEAO Regional Conference, Baguio City, Philippines, 21-27 March 1971. 18 p.

Even though the ultimate responsibility for school curricula is in the hands of the professional educators, family planning specialists should also give attention to the school curricula in their own activities. There are several reasons for this. First, major target audiences for family planning are the very large number of young people annually reaching marriageable age and becoming able to conceive. Secondly, communication with young adults by family planning workers should be easier and more effective if these young adults have had an orientation while they were students. Thirdly, family planning leaders have frequently been the ones who have stimulated an interest in population and family planning education among educators.

The paper identifies training, motivation, information-giving and adult education, as activities in family planning into which population education can be appropriately integrated. This choice to use training, motivation and information-giving rather than education as terms of reference is designed to emphasize the difference between the family planning worker and the school educator in their goals and methods. The education component of family planning is a reflection of the clinical approach that characterizes the family planning programmes.

Nine guidelines are then presented for family planning programmes to consider in undertaking a population education programme in their activities. To start with, the content and instructional methods should be pedagogically sound. Family planning workers tend to present only one view about the desired actions with regard to fertility behaviour. Population education recognizes that human values are subject to different interpretations and therefore, it prefers to present the pros and cons of different population issues to enable the clients to make reasoned judgements about their own reproductive behaviour. The responsibility for the introduction of population education into the formal educational system rests with the educators and it should be integrated into the curriculum rather than added as a new subject.

The content of population education must be worked out in detail by education specialists in each country. Original curriculum materials should be developed instead of relying heavily on models and textbooks from other countries. The formulation of content depends largely on the cultural value characteristic of a particular society. While topics such as population dynamics and quality of life issues are easily acceptable to many countries, the topics of human reproduction and sex education are often taboo. Whether specific and detailed information should be given concerning means for contraception in a population education programme is clearly a question which the educators of each country must decide. The population education content should be developed with full appreciation of related education and action programmes addressed to adults so that the educators can plan an educationally sound counterpart to public actions.

Realistic goals for population education should be formulated in view of the fact that while the educational system is introducing new values and attitudes, other social institutions may be deliberately or implicitly emphasizing traditional values. A long-range strategy for introducing population education should be formulated and ultimately introduced into the general framework of the curriculum system of the Ministry of Education.

Family planning leaders have important functions to play as stimulators, resource personnel, critics and supporters as they have a body of knowledge and resource materials with which educators ought to be acquainted. Finally, high priority should be given to universities and professional schools as centres for the general education of leaders, the preparation of professional personnel, and the development of basic knowledge on which policies and programmes may be built.

Descriptors: *Family Planning Education; General Discussion; Teaching Methods; Integration Approach*

Source: Population Education Clearing House
Unesco Regional Office for Education in Asia and the Pacific
P.O. Box 1425, General Post Office
Bangkok 10500, Thailand

Part Three: Development of Curriculum Materials in Specific Subject Areas: A Literature Review

While Parts One and Two deal with the general processes of developing population education curriculum materials in the in-school and out-of-school sectors respectively, this Part details the procedures for integrating population education concepts into more specific subject areas, both in-school and out-of-school. There are 16 selections abstracted in this section, three of which focus on out-of-school development programmes.

For the in-school sector, the 13 selections describe how population education concepts can be integrated into the following subject areas: social studies, home economics, health education, environmental education, science, medical education, hygiene and physiology, biology, teacher education, and geography. For the out-of-school sector, the three abstracts present strategies for integrating population education concepts into various aspects of farm management and agricultural training courses. This Part does not intend to provide actual curriculum materials and sample lessons on the various subject areas as they are infused with population education concepts but is rather meant to give the approaches and experiences undertaken in the integration of population education concepts into these subject areas. The 13 selections dealing with the in school subject areas treat this exposition in the same manner. An analysis of the documents abstracted here shows that they adopt similar procedures of first identifying which population-related concepts should be integrated into the concerned specific subject areas and into what areas of the subject matter they should be integrated. Nine selections go beyond this by further discussing how and when they should be taught. While all of the selections identify either the entry points in the school subjects or the population education concepts to be integrated into these school subjects, a few go further by providing sample lessons to illustrate how the concepts can be taken up in some subject areas, especially social studies, home economics, health education, science and environmental education.

Eight selections are the result of a National Workshop on Population Education undertaken by the Federal Ministry of Education, Curriculum Wing and the Population Welfare Division of Pakistan. This Workshop aimed at integrating population education concepts into hygiene and physiology, home economics, general science, biology, teacher education, social studies, environmental studies and geography. The procedures followed in integrating population education concepts into these various subject areas included: (a) analysis of the existing curricula and textbooks of the selected subjects in order to identify the population education concepts already included; (b) assessment of whether the exposition and detailing of population education concepts is effective in terms of demands of a particular discipline and the level of education for which it has been included; (c) determining whether the linkage at the academic, cognitive and affective levels between the population education and the concerned discipline has been clearly spelt out; (d)

identifying those population education concepts which are relevant to the demands of a particular discipline but have not been included in the curricula and textbooks; (e) detailing the new concepts so identified for inclusion in the existing curricula and textbooks; (f) developing textbooks and curricula outlines for the new population education concepts that have been identified.

For the out-of-school sector, the three selections start their expositions by first stating why population education should be integrated into farm management courses, agriculture co-operative training courses and agricultural training curricula. They also enumerate the various entry points appropriately used to integrate population education concepts into the agricultural courses. In addition, the documents also develop the population content for the specific subject matter and indicate the appropriate teaching-learning methodologies. One selection highlights the goals and scope of population education, some criteria for and methods of integrating population education content in the courses offered by agricultural colleges and universities and other considerations in planning the integration. These documents not only discuss the various teaching methodologies or approaches that can be used, but also append sample course outlines and teaching units as illustrations.

INTEGRATING POPULATION EDUCATION INTO SCIENCE EDUCATION

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Basnayake, V. *Population and family education in school curricula in the Asian region: natural sciences.* A working paper prepared for the Regional Workshop on Population and Family Education, Bangkok, 7 September – 7 October 1970. 14 p. (ED/CONF.61/3)

Population education can be integrated into a number of science education subjects in a step-by-step process. The aim is to: (a) know that a small family achieves, on the average, a higher degree of family welfare than a large family; (b) know that family size can be controlled; and (c) value the above items of knowledge so that the learners may guide their subsequent behaviour. There are several approaches to making a curriculum unit on population education. These are through family life, population pressure, sexuality and ecology. In constructing a whole unit in population education, the sequence may be based on any one of the four approaches. The paper appends two examples of a sequence of ideas based on the family welfare approach. The process of sequencing the content includes identifying the leading concepts, with each leading concept being divided into a set of main ideas. Each main idea is further sub-divided into sub-ideas. The amount of sub-division that can be carried out is practically endless. If one sets out to teach a very fine degree of sub-division, one will probably end up by writing the draft of a textbook.

In the first level of education, population education concepts can be introduced into elementary science specifically in the life science part of the subject where pupils study organisms and how they multiply, life cycles, population density or reproduction. These are all good entry points for population concepts. Mathematics can also be used for teaching population data using addition, substraction, multiplication, division and fractions. In the lower secondary level, general science includes components of biology, chemistry and physics which can be used for introducing population education concepts. As in the elementary level, the particular content most suitable for population education is life science or biology. For the upper secondary level, the ecology section of biology is the most appropriate subject to introduce population education. Ecology deals with the concept of interrelationships between organisms and this includes the study of population, community, succession, habitat and cycles of nature. Another appropriate place is reproduction, nutrition and growth and development. Points of contact between physics and population education are probably those on power resources, heat, solar energy and atom energy. For chemistry, the points of contact include the conservation of natural resources, pollution, hormones and their use in fertility control, energy, food resources and mineral resources.

Descriptors: *Science Education; Primary Grades; Secondary Grades; Course Contents; Integration Approach*

Source: Population Education Clearing House
Unesco Regional Office for Education in Asia and the Pacific
P.O. Box 1425, General Post Office
Bangkok 10500, Thailand

IMPACT OF POPULATION FACTORS ON THE AGRICULTURAL AND RURAL DEVELOPMENT PROCESS

25

Food and Agriculture Organization of the United Nations. *Population concepts in agricultural training curricula.* Rome, 1978. 16 p.

Agricultural and training institutions are the source of manpower for rural development. It is necessary that the training courses offered by these institutions include the causes and consequences of population because of the impact of population factors on agricultural and rural development processes. This will prepare their graduates and the future development workers to take cognizance of the population-development relationship in the course of their work.

This booklet a part of the FAO series of monographs on the integration of population education concepts with selected courses offered by agricultural colleges and universities, aims to acquaint administrators and curriculum designers with the subject matter. It describes the goals and scope of population education, some criteria for and methods of integrating population content in the curriculum and other considerations in planning the integration. The appendices provide examples of some source outlines on population.

Population education is defined as "an educational process which helps people understand the implications of population factors for the well-being of the individual, the family and society". It underscores the relationship between demographic factors and the socio-economic processes. Its primary goal is to improve the decision-making skills of an individual on population-related issues that have a bearing on living conditions.

When population education is integrated into the curriculum, it should cause a minimum dislocation in the curriculum, employ an inter-disciplinary approach and be relevant to the needs of the students. The three strategies used in introducing population content to the existing curriculum are the institution of a separate population course, the addition of a population unit in the course of study and the infusion of a population element in the subjects offered. The advantages and disadvantages of each are enumerated in the booklet.

In choosing which of the three methods to adopt, one should pay attention to the resources available especially those affecting manpower needs and training requirements and methods of evaluation.

Descriptors: *Non-formal Education; Integrated Rural Development; Agricultural Education; Curriculum Outline; Training; Integration Approach*

Source: Food and Agriculture Organization of the United Nations
Via delle Terme di Caracalla
00100 Rome, Italy

CO-OPERATIVE TRAINERS TO TEACH POPULATION EDUCATION TO FARMERS

26

Food and Agriculture Organization of the United Nations. *Population concepts in agriculture co-operative training courses; draft.* Rome, 1980. 49 p.

Since population factors affect the co-operative's objective of improving the lives of the rural people, population education has been integrated with the training pro-

grammes of agricultural co-operatives. The size of the population determines the allocation of land, food and other necessities to individuals and families. It is necessary that the farmers understand this connection so that they may decide wisely on these issues. The co-operative trainers concerned with teaching the farmers how to increase food production and to balance resources with needs are in a better position to point out this relationship. This integrated teaching approach means gradually and regularly presenting population concepts to the farmers whenever they relate with the regular subjects taught.

This guide in draft form – one of a series of educational materials integrating population issues with agricultural and co-operative courses that the Food and Agricultural Organization (FAO) has produced – shows how co-operative and population concepts can be mixed. The purpose is to broaden the scope of training activities for agricultural co-operatives and to indicate to trainers some areas of discussion that will help rural people understand the impact of population factors on family and community living.

It contains a list and a description of agricultural co-operative subjects and the population concepts that can be used in each. The recommended population concepts that may be introduced in relation to specific co-operative subjects are: (a) the characteristics and distribution of the population (specifically rural), with the organization of agricultural co-operatives; (b) population growth and migration – their impact on land and food resources, employment and social services, with the social and economic characteristics of co-operatives; (c) the factors that affect the employment of women, with the co-operative laws and by-laws; (d) decision-making related to family size, with management process; (e) relation of family size to income and savings, with allocation of capital resources to financial management; (f) population characteristics of co-operative leaders, with personnel policies and practices; (g) family size and composition, with farm management; (h) population size and its effect on production and consumption patterns, with marketing; and (i) effects of family size on capacity to earn, with the use and repayment of credit.

The booklet also discusses some communication approaches and methods that can be used. The suggested approaches include communicating the concepts in terms relevant to the farmers' needs, problems and benefits; presenting both sides of an idea; using channels of communication available to the illiterates; presenting the conclusion clearly; and seeking the co-operation of the target audience's reference group. Lecture/discussion, case method, role playing and field visits are the methods that can be used effectively.

Descriptors: *Non-formal Education; Co-operative Education; Teaching Guide; Agricultural Education; Communication Approach; Course Contents*

Source: Food and Agriculture Organization of the United Nations
Via delle Terme di Caracalla
00100 Rome, Italy

RELATIONSHIP BETWEEN POPULATION VARIABLES AND PRODUCTION AND DISTRIBUTION IN FARMING

27

Food and Agriculture Organization of the United Nations. *Population concepts in farm management courses.* Rome, 1977. 27 p.

Farm management deals with the organization, operation and management of a piece of land. It provides a good context for explaining on an individual level the relationship between resources, production and distribution in farming, on the one hand, and population variables on the other. To infuse population concepts into the subject matter under discussion in this course is, therefore, a sound idea. This booklet presents a syllabus in farm management enriched with population ideas. It identifies the relevant topics for the introduction of population concepts, develops the population content for the specific subject matter, and indicates the appropriate teaching-learning methodologies to use to put the ideas across.

The subjects covered in farm management that lend themselves to population issues are the management and decision-making process, farm planning and budgeting, farm business analysis, acquisition and management of capital resources, management of farm labour and farm work, marketing practices and problems, public policy and the legal environment, economies of farm management, farm records and accounting and farm layout. The interplay of the relevant population concepts and the topics just mentioned are discussed in greater detail in the booklet. In general, the focus is on the impact of family size and characteristics on decisions related to the various subject matter.

The most commonly used teaching method is the lecture discussion type together with laboratory exercises. Seminars, symposia, case study, preparation and analysis of a project and field trip or educational tours are also recommended with details on how to use them. Teaching methodologies may differ depending on the type of work envisioned for the graduates. If they are to become extension workers, additional emphasis should be given to project supervision. Those intending to become teachers and researchers have to be provided with experiences such as case studies, that will develop their analytical ability.

A proposed farm management syllabus is included in the booklet. It gives the course outline and the population education components. The latter is sub-divided into related population, human factor consideration, pertinent data and sources and special learning activities and experiences.

Descriptors: *Non-formal Education; Farm Management Courses; Curriculum Outline; Integration Approach; Teaching Methods*

Source: Food and Agriculture Organization of the United Nations
Via delle Terme di Caracalla
00100 Rome, Italy

DOCTORS AS INFLUENTIAL TEACHERS OF POPULATION EDUCATION

28

Jayasuriya, J.E. *The inclusion of population education in the curriculum of medical education.* Bangkok, Unesco Regional Office for Education in Asia, 1972. 7 p.

Among the various categories of personnel engaged in professions involving inter-personal contact and relationships among human beings on an extensive scale, two professions stand out pre-eminently, namely, the teaching profession and the medical profession. The leadership role of the physician is manifested in the face-to-face physician-patient situation but apart from such person to person contacts, leadership can be exercised in issues of

public policy by clear and unambiguous statements on the part of the medical men of the insights that medical science gives. In addition to the importance of medical personnel in the field of population, the enormity of the threat posed by large families and rapid population growth also affect the promotion of positive health especially in the context of the less developed countries. These are manifested in the inadequacy of existing health services; nutritionally inadequate diets in childhood years; increasing urbanization, compounding the problem of environmental sanitation; failure to obtain employment and the tensions of an over-crowded urban life endangering mental health; growing health hazards from the pollution of air and water. At the micro level or at the level of the family, the consequences of population growth are also discussed.

These consequences demand that population education be included in the medical curriculum. Population education basically draws its content from demography, economics, sociology, anthropology, sciences and medical science and is designed to give learners an insight into the totality of issues connected with population, ranging from the nature, measurement, causes, determinants and consequences of population growth as well as of urbanization both at the macro and micro levels. The population content that will have to be considered for inclusion into the medical curriculum will include the following: (a) population indices and trends; (b) the relationship between population growth and natural resources; (c) the relationship between food, nutrition, health and population growth; (d) the relationship between population growth, economic development and employment; (e) the relationship between population growth and social development; (f) the relationship between population and international relations; (g) national population policies; and (h) family living.

One question that remains is the extent to which family planning education should be provided for, within the curriculum of medical education, as a basically medical activity distinct from population education.

Descriptors: *Medical Education; Course Contents; Family Planning; Contraceptive Methods*

Source: Population Education Clearing House
Unesco Regional Office for Education in Asia and the Pacific
P.O. Box 1425, General Post Office
Bangkok 10500, Thailand

POPULATION EDUCATION COMPONENTS IN HOME ECONOMICS CURRICULUM

29

Manee Kuanpoonpol. *Home economics with population education: family-centred, work-oriented and problem-solving approaches.* Bangkok, Unesco Regional Office for Education in Asia, 1974. 10 p.

This article answers four questions. What population-related concepts should be integrated into home economics? In what areas of home economics should population education components be integrated? How should they be taught? When should they be taught?

The aspects of home economics which may be directly or indirectly concerned

with population issues have been called by different names including, home management, the family, marriage, marriage and family, family development, family life education, mother and child care, problems of living and family living. Each of these subjects is concerned with stages in the family life cycle. Viewed from this perspective, the population education component of home economics curricula could appear in each of the following units: food, clothing, home and family management, family life education, and child care and guidance.

Population education can be integrated into almost every unit of teaching if proper approaches are employed. One of the best ways to integrate population education concepts through the family-centred, work-oriented and problem-solving approach. This approach teaches knowledge and skills in an integrated manner, where the teacher talks and lectures less, but guides the students to do the work, shifting the responsibility of work to the students. The aim is to instil responsible attitude formation. To illustrate some of the concepts discussed, a unit on food preparation is examined in detail. The unit presents the family setting where good working habits and experience in assuming responsibility are shown. The unit teaches the process of menu preparation and the criteria for planning a nutritious menu. Beside this there are practical exercises of work and responsibilities.

Descriptors: *Home Economics Education; Course Contents; Integration Approach*

Source: Population Education Clearing House
Unesco Regional Office for Education in Asia and the Pacific
P.O. Box 1425, General Post Office
Bangkok 10500, Thailand

The Ministry of Education (Curriculum Wing), Population Education Cell, Pakistan, in collaboration with the Population Welfare Division, Islamabad, held a National Workshop on Population Education in Islamabad from 19 to 24 December 1983.

The workshop was held to find ways to integrate population education concepts into the secondary school curriculum. The participants analysed the existing curricula and textbooks of the selected subjects for classes VI to X in order to identify the population education concepts already included; assessed whether the exposition and detailing of population education concepts is effective in terms of demands of a particular discipline and the level of education for which it has been included; and determined whether the linkage at the academic, cognitive, and affective levels between the population education and the concerned discipline has been clearly spelt out. They also identified those population education concepts which are relevant to the demands of a particular discipline but have not been included in the curricula and textbooks; detailed the new concepts so identified for inclusion in the existing curricula and textbooks; and developed textbook and curricula outlines for the new population education concepts that were identified. The following subjects were selected for integration: Urdu, Sindhi, English, social studies, home economics, geography, environmental studies, biology, hygiene and physiology, general science and teacher education.

The eight abstracts that follow all relate to this workshop and had the same aims and objectives.

POPULATION EDUCATION INTO BIOLOGY

30

Pakistan. Ministry of Education (Curriculum Wing). Population Education Cell. *Report of the National Workshop on Population Education (Biology for classes IX-X), Islamabad, 19-24 December 1983.* Organized in collaboration with the Population Welfare Division, Islamabad. [Islamabad, 1983]. 58, xxii p.

Based on the study made of existing biology curricula and textbooks, the following recommendations were made: (a) a new biology curriculum and textbook based on population education component should be developed for the secondary level; (b) instructional units for the new developed textbook should be developed on the style of the instructional unit included in the Workshop report; (c) biology texts should be developed which particularly assess students knowledge of the population education concepts; (d) all the developed materials should form a part of the B. Ed. curriculum and in-service training; (e) in order to teach the population education-oriented biology effectively, each school should be provided with the Urdu translation of literature on population and its integration in biology in different developing countries of the world; (f) each school should ensure that biology teachers are trained in teaching population education-oriented biology and provide the necessary facilities; (g) an in-service teacher training programme should be started in each provinces as soon as the proposed instructional materials are developed.

Descriptors: *Science Education; Biology; Secondary Grades; Content Analysis; Course Contents; Integration Approach; Pakistan*

Source: Population Education Cell
Ministry of Education (Curriculum Wing)
Islamabad, Pakistan

POPULATION EDUCATION INTO ENVIRONMENTAL STUDIES

31

Pakistan. Ministry of Education (Curriculum Wing). Population Education Cell. *Report of the National Workshop on Population Education (Environmental studies for classes IX-X), Islamabad, 19-24 December 1983.* Organized in collaboration with the Population Welfare Division, Islamabad. [Islamabad, 1983]. 17, xxii p.

This report recommends that (a) the curriculum be revised by a competent Curriculum Development Committee using the following topics by chapter in the order given: (i) Environment and biosphere, (ii) Closed systems and natural cycles, (iii) Environmental ethics, (iv) Adaptations, (v) Factors constituting the environment, (vi) Factors affecting the environment, (vii) Harmful effects of pollution, (viii) Population growth and the environment; (b) a textbook should be introduced in this subject which should discuss the overall concepts of environmental education objectively defining the effects of pollution and preservation of the environment in a broad sense. The textbook, which should total from 200 to 250 pages, should also incorporate the practical aspects of cleanliness and public health and economic growth in relation to environmental planning; (c) an activity-based approach to environment studies is recommended; (d) generous use of audio-visual aids should be promoted; (e) in the scheme of studies of secondary school examination, 100 marks should be allocated for this subject; (f) one

teacher for each school offering environmental studies and population education should receive training. The master trainers programme should also be organized in Education Extension Centres before the teachers's training programme; (g) teachers' guides should be developed in collaboration with other concerned agencies.

Descriptors: *Environmental Education; Secondary Grades; Content Analysis; Course Contents; Integration Approach; Pakistan*

Source: Population Education Cell
Ministry of Education (Curriculum Wing)
Islamabad, Pakistan

POPULATION EDUCATION INTO GENERAL SCIENCE

32

Pakistan. Ministry of Education (Curriculum Wing). Population Education Cell. *Report of the National Workshop on Population Education (General science for classes VI-X), Islamabad, 19-24 December 1983.* Organized in collabortion with the Population Welfare Division, Islamabad. [Islamabad, 1983]. 21, xxii p.

This report identifies already existing population-related concepts and content areas wherein further population concepts could be infused. It was found that in the class VI-VIII curriculum there were 35 existing concepts related to population education. Of these, enrichment material has been suggested for 20 concepts. A further 18 population related concepts have been suggested for infusion at proper plug-in points in the curriculum. In the class IX-X curriculum a total of 17 population-related concepts were identified out of which enrichment material has been outlined for 6 concepts. Since a full 24-page chapter exists in the class IX-X general science textbook which deals with population-related concepts, only one additional concept is suggested for inclusion.

A number of recommendations were made. Since the committee members who made these recommendation were mostly science education experts, the work should be reviewed further by population experts before finalization. There is a danger that the inclusion of the recommended additional population concepts in the curriculum may further overload the already overloaded content. It is recommended that the curriculum review panels may take note of this fact and delete some of the redundant material to make room for the relevant population content. Further, there may be a large amount of overlap of population topics in different subjects which should also be removed. An intensive training course in population education should be held for textbook writers before entrusting them with the task of developing textbook material related to population concepts. A comprehensive source book on population should be developed for curriculum planners, textbook writers and teachers. The book should be used as a prescribed text at all in-service training courses on population. Great care needs to be exercised by authors in writing population units so as to avoid provoking orthodox reaction and conveying incorrect impressions of the purposes of population education. Specific population-related charts and pictures may be developed to illustrate population concepts and be provided to schools. Population education may be made a compulsory component of all teacher training courses at PTC, CT, B. Ed. and M. Ed. levels so that fresh teachers pouring into the system come already well-oriented in the discipline and lastly, popu-

lation may also be made a compulsory component of all in-service training courses for teachers and teacher trainers.

Descriptors: *Science Education; Secondary Grades; Content Analysis; Course Contents; Integration Approach; Pakistan*

Source: Population Education Cell
Ministry of Education (Curriculum Wing)
Islamabad, Pakistan

POPULATION EDUCATION INTO GEOGRAPHY

33

Pakistan. Ministry of Education (Curriculum Wing). Population Education Cell. *Report of the National Workshop on Population Education (Geography for classes IX-X), Islamabad, 19-24 December 1983.* Organized in collaboration with the Population Welfare Division, Islamabad. [Islamabad, 1985]. 14, xxii p.

This report looks into how population education concepts can be integrated into geography. An analysis of the existing textbook and curriculum materials on geography showed that the curriculum covered most of the concepts needed for population education appropriate at this level. However, some more concepts have been identified for inclusion including over-population, distribution of population, migration, manpower and limitations of land and essential services for urban growth. It was observed that the concepts included in the curriculum were not properly dealt with in the textbook. To achieve the desired effect, explanatory statements have been made regarding modifications in the textbook at relevant places. Audio-visual aids have been specified and guidelines provided for the teachers. The latest available population figures were provided so that the textbook writer may incorporate them in the textbook. Based on these findings, the recommendations were: First, graphics on population information designed for adolescent school-going groups should be prepared and published under the auspices of the Ministry of Education in collaboration with Population Division. The Ministry of Education should make sure that these graphics reach every secondary school of Pakistan. They should be despatched directly to the schools and it should be a continuous process. Second, a project on the preparation and compilation of appropriate materials on population education including bibliography, a book of readings and instructional and teaching aids should be undertaken. This project should provide material for students, teachers and others interested in population education programme. Lastly, education extension centres and curriculum centres should organize the following programmes: (a) orientation courses, as currently being organized, should be further strengthened; (b) population education should form a part of every in-service course for geography and social studies teachers; (c) a project should be taken up to evaluate the work done so far and suggest measures to make this programme more successful; (d) a micro-testing programme should be undertaken to ascertain the practicability and reliability of these suggestions before they are implemented.

Descriptors: *Social Science Education; Geography; Secondary Grades; Content Analysis; Course Contents; Integration Approach; Pakistan*

Source: Population Education Cell
Ministry of Education (Curriculum Wing)
Islamabad, Pakistan

POPULATION EDUCATION INTO HOME ECONOMICS

34

Pakistan. Ministry of Education (Curriculum Wing). Population Education Cell. *Report of the National Workshop on Population Education (Home economics for classes VI-X), Islamabad, 19-24 December 1983.* Organized in collaboration with the Population Welfare Division, Islamabad. [Islamabad, 1983]. 20, xxii p.

The existing home economics curriculum and textbooks were reviewed to identify already existing population-related concepts and also to identify content areas wherein further population concepts could be infused. The report recommends that: (a) the work carried out by different committees for the same subject may be reviewed by a National Committee to ensure a uniform sequential approach for the additions suggested for Classes VI-XVI; (b) short orientation courses should be arranged for textbook writers; (c) orientation courses should be organized at all the existing home economics colleges of Pakistan, to acquaint the faculty and the students with concepts of population education and its relationship with the subject; (d) population education should be included in all the Teacher Training School and College Curricula; (e) in-service teacher orientation programmes should be organized for the concerned teachers to enhance the teaching/learning process; (f) textbooks of the Punjab Board should be adapted to incorporate the concepts of population education; (g) the examination papers must have at least one question, preferably a compulsory question, on the quality of life and family size, the progressive development of the nation in relation to population etc.; (h) workshops are necessary to develop suitable audio-visual aids for the province in the shape of graphs, posters, models and flip charts etc.; and (i) it is necessary to compute the costs of raising one child in the province, coming from a middle class and the lower income group, so as to reinforce the concept of family size and quality of life.

Descriptors: *Home Economics Education; Secondary Grades; Content Analysis; Course Contents; Integration Approach; Pakistan*

Source: Population Education Cell
Ministry of Education (Curriculum Wing)
Islamabad, Pakistan

POPULATION EDUCATION INTO HYGIENE AND PHYSIOLOGY

35

Pakistan. Ministry of Education (Curriculum Wing). Population Education Cell. *Report of the National Workshop on Population Education (Hygiene and physiology for classes VI-X), Islamabad, 19-24 December 1983.* Organized in collaboration with the Population Welfare Division, Islamabad. [Islamabad, 1983]. 9, xxii p.

Based on the results of the content analysis of existing hygiene and physiology curricula, the participants recommended a division of the course content into three sections: the human body and its environment, physiology and hygiene; rearrangement of existing topics and addition of introductory chapters at the beginning of each section in order to facilitate integration and perspective for insertions of population education topics. The textbook was found so highly technical and full of unnecessary terminology that it was not

considered suitable. A drastic reduction of details and terminology should be carried out to cut down the present material to a maximum of two-thirds or even one-half of its present size. The integration of population education concepts should then be accommodated with ease. However indirectly population education is imparted, its success will depend on the co-operation of important influencing agents and leaders in the community. There is a need to educate and convince not only teachers of the various curricula, but also Union Council members, Imams, Khateebs and Islamiyat teachers. Intensive teacher training should be undertaken to develop their competencies in teaching this particular subject.

Descriptors: *Health Education; Science Education; Secondary Grades; Content Analysis; Course Contents; Integration Approach; Pakistan*

Source: Population Education Cell
Ministry of Education (Curriculum Wing)
Islamabad, Pakistan

POPULATION EDUCATION INTO SOCIAL STUDIES

36

Pakistan. Ministry of Education (Curriculum Wing). Population Education Cell. *Report of the National Workshop on Population Education (Social studies/Pakistan studies for class VI-X), Islamabad, 19-24 December 1983.* Organized in collaboration with the Population Welfare Division, Islamabad. [Islamabad, 1983]. 26, xxii p.

This report studies the existing curricula of social studies with a view to seeing how population education concepts have already been accommodated and in pinpoint areas where required concepts can be added with modification. The group also prepared materials for inclusion in the textbooks and prepared guidelines for authors of textbooks. They recommended that (a) the existing curricula requires revision in order to integrate the concepts of population education; (b) the members of the group be associated while revising and rewriting the curricula; (c) when the curricula are revised the textbooks should be rewritten with a better integration of the concepts of population education so that the students get a feel of this area of knowledge; (d) relevant demographic details should be added in the form of charts, maps, graphs, at the end of each textbook, because they are normally not easily available; (e) social studies/Pakistan studies teachers in particular, require orientation courses in the concepts of population education and the methodology of teaching it; (f) pre-service courses for teachers should be, reviewed to accommodate the concepts of population education; (g) teachers guides are necessary; audio-visual aids like charts, maps and graphs, giving demographic representations, are necessary.

Descriptors: *Social Science Education; Secondary Grades; Content Analysis; Course Contents; Integration Approach; Pakistan*

Source: Population Education Cell
Ministry of Education (Curriculum Wing)
Islamabad, Pakistan

POPULATION EDUCATION INTO TEACHER EDUCATION

37

Pakistan. Ministry of Education (Curriculum Wing). Population Education Cell. *Report of the National Workshop*

on Population Education (Teacher education), Islamabad, 19-24 December 1983. Organized in collaboration with the Population Welfare Division, Islamabad. [Islamabad, 1983]. 65, xxii p.

The group looking into the integration of population education into the teacher training programmes recommended that: (a) the content or the subject of population education should be infused in the curriculum and also reflected in the textbooks for the elementary teacher training programme; (b) components of population education should be added to Pakistan studies and science in the relevant portions in B. Ed. curriculum. This can be done by adding two or three chapters; (c) a package of resource material should be prepared at national level and a set provided to each training centre in the provinces; (d) a set of teacher's guides be distributed among the trainers free of cost; (e) resource centres be established at district headquarters at elementary teacher training institution centres linked with the Tehsil training centres; (f) a documentary film, showing and comparing changes in population be given to resource centres which are already equipped with a film projector; (g) lecturers/subject specialists who are required to teach population education be given proper orientation of the subject at provincial training centres. Six days training programmes is considered to be sufficient. Statistically oriented resource material and introduction to the use of learning package should be a requirement; (h) the above mentioned teams of key personnel be given sufficient training in the production and use of AV aids for the subject.

Descriptors: *Teacher Education; Pakistan*

Source: Population Education Cell
Ministry of Education (Curriculum Wing)
Islamabad, Pakistan

EXPERIENCES IN INTEGRATING POPULATION EDUCATION IN SELECTED SCHOOL SUBJECTS

38

Unesco. Regional Office for Education in Asia and the Pacific. "Population education in selected school subjects," in: *Population education a source book on content and methodology.* Bangkok, 1980, p. 44-57. (Population Education Programme Service).

In most countries where population education has been introduced for the first time into the school curriculum, population education is not offered as a separate discipline because in most cases, the curricula are already overcrowded. Thus, contents drawn from demography, population studies and other population-related subjects are used in enriching existing school disciplines such as health education, home economics, the natural sciences and social studies. Logical integration and enrichment require two prerequisites, namely a full grasp of the different population concepts to be integrated, and a thorough knowledge of the content coverage or scope and sequence of the discipline to be enriched. There are three main approaches adopted for introducing population education in the region, namely, infusion, integration and as a separate subject.

To illustrate these points, this article gives several examples in integrating population education in selected school subjects. In home economics, for example, there are five basic conceptual themes which have great potential for enrichment of population education concepts. These are food and nutrition, housing and home management, family life education, child care and development, and clothing and textiles. Food and nutrition could easily include such topics as family meals, food budgets,

nutrition and health vis-a-vis family size which are population education concepts. Likewise, child care and development include content such as the developmental stages of life from conception to baby hood, as well as pre-and post-natal care of both the mother and the child.

In the area of health education, the educational message of most lessons in population education and in health education is not to control population growth per se, rather that people should be healthy to contribute maximally to national development rather than become a population who are liabilities to a nation.

Environmental education helps the pupils develop an understanding of the finite nature of the vital natural resources of the planet and that with increased population, improvement in the standard of living and advancement of technology, the use of natural resources is increasing rapidly. This has in turn caused a deterioration of the environment and to cause negative effects on human as well as other forms of life.

Social studies deals with people, and their cultural values, lending itself easily to integration of population education concepts. For example one predominant values in the region is the preference for a son. In many countries, the social value, son preference, is regarded as one of the socio-economic factors affecting population change. A lesson is given to illustrate how family size is affected by the value of son preference.

In science education, the article presents a lesson on the "Effects of overcrowding on individual needs" to illustrate how population education contents can be incorporated into science.

Descriptors: *Home Economics Education; Health Education; Environmental Education; Social Science Education; Science Education*

Source: Population Education Clearing House
Unesco Regional Office for Education in Asia and the Pacific
P.O. Box 1425, General Post Office
Bangkok 10500, Thailand

WHY POPULATION EDUCATION SHOULD BE TAUGHT AT THE SECONDARY LEVEL

39

Wayland, Sloan R. *Population study in the secondary school curriculum.* Paper presented at the National Council of Studies Meeting, November 1965. 8 p.

This article first presents the reasons why population should form part of the secondary school curriculum. Then it proceeds to discuss several aspects of curriculum development. The first aspect deals with the scope of population study. Although the article does not provide clear boundary lines, it states that population refers to the discipline in which the numbers of human beings are considered in relation to vital processes – births and deaths – and to a set of structural variables some of which are biological, such as age and sex and marital status. The second aspect has to do with three population goals: (a) development of an understanding of the significance of population characteristics as a basic factor in a number of social problems, both domestic and foreign;

(b) preparation for decisions as to size of family to be made by students when they establish their own families; and (c) preparation for consideration of an action toward public policy issues directly related to population concerns. The third aspect deals with the significance of population characteristics. There are a number of characteristics of the population which may help to explain certain types of social phenomena which on the surface do not seem to be related directly to such factors such as the increase in crime rate, general age structure, urban problems and orderly and careful development of community facilities. These characteristics include rate of growth of population, age structure, sex ratio, the dependency rate, level of infant mortality, the rates of migration, age at marriage, age specific birth rates and the size of families.

The paper goes on to discuss the relationship of instruction in population to other aspects of the curriculum in social studies and in other areas of instruction. Four general strategies for curriculum innovation have been identified as a basis for the consideration of increased attention to population problems. These include: (a) establish a new course; (b) avoid a special course but seek to gain a level of understanding and commitment on the part of teachers so that the new field of study comes in at many places, or permeates the existing units without serious modification of the curriculum; and (c) restructure the social studies curriculum so that a new field of study finds its place in a new pattern. The article then enumerates some entry points in the field of social studies for population concepts to come in.

In the development of a programme to teach population into the social studies curriculum, the classic problems of well-conceived teaching units, teachers prepared to teach such units, teachers interested in teaching such units, adequate resource materials for students and teachers and a curriculum framework within which to fit such a unit have to be considered.

Descriptors: *Social Science Education; Economics; History; Geography; Secondary Grades; Educational Levels*

Source: Population Education Clearing House
Unesco Regional Office for Education in Asia and the Pacific
P.O. Box 1425, General Post Office
Bangkok 10500, Thailand

Part Four: State-of-the-Art on Curriculum Development in Population Education in Asia and the Pacific: A Literature Review

This Part abstracts eight documents. Six are reports of regional meetings and workshops held on various aspects of population education and two are case studies of selected national population education programmes.

The six reports of various meetings and workshops carry a comparative review of efforts undertaken by countries in Asia and the Pacific in the field of curriculum development in population education, specifically identifying commonalities, differences, problems encountered and solutions formulated to answer these problems. These various programmes on curriculum development have been analysed by the documents using the following variables: (a) strategy for curriculum planning and institutionalization; (b) approach of integrating population education into the school and out-of-school system; (c) grade levels into which population education concepts are being introduced; (d) subjects/disciplines into which population education concepts are being introduced; (e) procedural steps being followed in developing the curriculum; and (f) contribution of population education to curriculum renovation.

With regard to curriculum planning, different modalities are being used by different Member States for instituting population education in their educational systems. One type is the establishment of a curriculum section within a population education centre manned by population experts, subject specialists, curriculum planners and administrators. This modality is found in Bangladesh, Philippines, and Indonesia. In some countries like Malaysia, Sri Lanka, Pakistan, Nepal and Thailand population education programmes have been established as part of the Curriculum Development Centre. Another approach convenes staff members from many different sectors in a workshop to develop the curriculum materials on an ad-hoc basis, e.g. Maldives, Viet Nam. The third type is through the establishment of a central committee on a temporary basis constituted by the Ministry of Education composed of population education experts and teachers from inside and outside of the Ministry e.g. Indonesia. In some countries, a curriculum board of subject specialists is organized to work out the curriculum.

With regard to the modality for integrating population education concepts into the school system, there are basically two approaches, namely, the integrated and separate subject approaches. The integrated approach takes the following forms: (a) sub-unit; (b) infusion; (c) permeation. The separate subject approach has also the following forms: (a) elective subject; (b) mini-course; and (c) required subject. The most popular mode of introduction in the region is the integration of population content with several areas. Also, majority of the countries have included population education at the secondary level with the exception of four countries which have introduced it at the primary level and a small number at the tertiary level. In terms of content areas, although the overall goals of population education at the school level are more or less the same, there are differences in the immediate objec-

tives, content areas, subjects of integration as well as approaches for curriculum development. For example, the curricula in population education of Republic of Korea and the Philippines include content relating to sexuality and family planning whereas other countries have avoided to include them because of socio-cultural factors.

Almost all countries have followed more or less similar design for developing their curriculum in population education. Countries usually begin the process by making a survey of the population-related content already existing in syllabuses or textbooks. The results are used as a basis for preparing the goals of population education, for defining the conceptual framework and identifying population education-related subjects for each grade in the form of scope and sequence.

This is followed by the actual preparation of the curriculum materials such as teacher's and students' materials. The final two steps carried out by the countries are to ensure the integration or institutionalization of population education into the existing educational systems and once this is achieved, to undertake a continuous evaluation of its usefulness.

With regard to problematic areas being encountered by countries in curriculum development activities, the documents abstracted here claim that the most serious is the fact that most countries come up with very elaborate, detailed, and often very ambitious curricula, often found unacceptable to the people looking after the total curriculum system. Consequently, population education contents are hardly reflected in the textbooks or are often too thin to register any impact on the students. To solve this problem, two documents arising from two workshops came up with the following recommendations: (1) offering learners adequate opportunities to take immediate or intermediate action (what a young learner can do to improve the quality of life for oneself and others) and (2) development of adequate learning experiences or a core that can be broadly recommended at various stages of schooling. A reconceptualization of population education will ensure manageable and relevant content at different levels; employ participatory methods, enable learners to relate through their immediate environment and concerns and offer adequate opportunities to take immediate or intermediate action which is socially desirable and individually meaningful.

One selection showed that in response to the recommendation to develop adequate learning experiences in population education, a workshop was held and generated guidelines for determining these adequate learning requirements and guidelines for the development and use of such packages.

In the out-of-school sector, one document, synthesizing the experiences of eight countries in the region claims that curriculum development in out-of-school population education is mainly characterized by the diversity of its target groups. Their ages, marital status, education and socio-economic profiles vary to a wide degree. The diversity of the target groups is further compounded by two important features: (a) they may be captive or volunteer audience; (b) they may be available for varying periods of time for population education. Faced with this set of diver-

sities, it is clear that no uniform curriculum context can be planned to take them into account. There are a number of procedures being followed in curriculum and instructional materials development. These include the following: (a) survey of the target group; (b) identification of focal points for the curriculum; (c) selection of content: (d) selection of learning experiences and (e) preparation and pretesting of instructional materials. The synthesis also identified some innovative features in the curriculum development projects being undertaken by the eight countries studied here.

The synthesis then goes into the various types of materials already produced and being produced for out-of-school population education programmes. These materials can be divided into two broad categories namely, (a) materials to promote awareness; and (b) instructional materials. The basic differences between the two kinds of materials lie in the objectives underlying their preparation, the nature of the content and the impact it has on those who are exposed to them.

Several countries have made attempts to integrate population education content into development programmes with varying degrees of success. The case studies showed that none of them is quite satisfied with what has been achieved so far, and that if population education programmes in the out-of-school sectors are to be launched on an extensive scale, a priority area that needs attention is the development of skills for preparing integrated curricula and materials. Workshops for developing skills in the development of curriculum and instructional materials had been undertaken by these countries. Generally, the instructional materials were prepared presenting the content in an integrated manner. The integration of population education into the educational content of other development programmes has the advantages of focusing attention on the relevance of the population factor in the development process. Because of its controversiality, population education cannot be easily integrated in the content of certain programmes. A possible solution would be to regard the integrated population education content as providing a natural and relevant starting point to open up population issues and then to use it as a springboard for drawing attention to important facets of reproductive behaviour.

CASE STUDIES ON EDUCATIONAL INNOVATIONS BROUGHT ABOUT BY POPULATION EDUCATION

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Unesco. Population Education Section. *Study of the contribution of population education to educational renewal and innovation in El Salvador, the Republic of Korea, Philippines and Tunisia.* Paris, 1980. 206 p. (Co-ordinated Action Programme for the Advancement of Population Education).

This study was conducted to show how population education has contributed to educational innovation and renewal in El Salvador, the Republic of Korea, Philippines and Tunisia. The case studies examined the contribution of population education to the improvements of various parts of the educational process: content, curricula, methods and personnel training. This abstract-bibliography focuses its discussion on the effects of population education on curriculum and materials development.

Should population education constitute a new discipline, thereby necessitating the preparation of an entirely new and separate curriculum? All countries decided that population education should be integrated into the subjects already being taught, either in the context of curriculum revision undertaken in the frame of an overall reform of the educational system or by suitably adapting and amplifying existing curricula. The common choice was in harmony with the philosophical goals and general objectives of population education as being multi- and inter-disciplinary. It was also in harmony with a strategy of innovation which was aimed at limiting to the minimum, the creation of institutions or bringing about structural changes in the Ministry and in the existing institutions. The next question was how to bring about this integration, by what means and according to which methods. Two solutions were proposed. The first solution consisted in introducing into the course syllabus of a given subject, sequences and study units related to population phenomena and linked to the subject concerned. An effort was made to reduce the risk of dispersion by endeavouring to integrate the concepts and by introducing a system of verification and correlation. This approach resulted in the preparation of training modules. The second solution consisted in providing population education in the ordinary classes in a maximum possible number of subjects. This method was not well adapted for treating the subject with either continuity or coherence. An attempt was made to overcome this deficiency by developing objective based curricula and model lessons based on the objective centred teaching.

The innovative effects of this approach developed a great interest among the teachers for social affairs and a strong sense of responsibility in regard to national development. It also led them to attempt "team teaching" and to think of other forms of connected teaching. On the part of the students, while creating in them the motivation for learning, these responses also helped them to be better prepared for making choices with regard to their subsequent studies and above and beyond it, in their lives. It has also resulted in a more easy-going and simple relationship between boys and girls.

Descriptors: *Educational Innovations; Philippines; Korea, Republic of; Tunisia; El Salvador; Integration Approach*

Source: Population Education Clearing House
Unesco Regional Office for Education in Asia and the Pacific
P.O. Box 1425, General Post Office
Bangkok 10500, Thailand

IMPROVING THE QUALITY OF CURRICULUM MATERIALS

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Unesco. Regional Office for Education in Asia and the Pacific. *Action programmes for the qualitative improvements of population education.* Report of a Regional Consultative Seminar, Bangkok, Thailand, 11-18 October 1982. Bangkok, 1983. 106 p. (Population Education Programme Service.)

One of the big areas discussed for renovation during this seminar was on curriculum development. Although most countries have included population education at the secondary level, four have introduced it starting grade I and a smaller number at the tertiary level. The most popular mode of introduction is the integration of population content with several areas. It is only China and Thailand which introduce population education into a single subject. One great advantage of introducing population education into a single subject is in the coherence and visibility that the content may have, whereas integration with a number of subjects may result in dilution of messages. At the tertiary level, integration with a number of subject areas and the provision of separate courses appear to be used in several countries. The preparation of curriculum and instructional materials has been undertaken by most countries by first undertaking a survey of the population-related content already existing in syllabuses or textbooks. After this, many countries come up with a very elaborate and detailed, and often very ambitious curriculum, not often found acceptable to the people looking after the total curriculum system. Consequently, population education contents are hardly reflected in the textbooks.

To solve this problem, the participants recommended a reconceptualization of population education to bring it into sharper focus. This entails (a) offering learners adequate opportunities to take immediate or intermediate action (what a young learner can do to improve the quality of life for oneself and others). It is assumed that this action will yield distinct benefits and also lay a firm foundation for fertility-related behaviour when the time is ripe for such action; (b) development of minimum and adequate learning requirements, or a core that can be broadly recommended at various stages of schooling. Population education will ensure manageable and relevant content at different levels, employ participatory methods, enable learners to relate through their immediate environment and concerns and offer adequate opportunities to take immediate or intermediate action which is socially desirable and individually meaningful.

In the non-formal sector, the following issues were raised: (a) how to convince population educators to integrate their programmes with non-formal education and development programmes; (b) how does one implement such integration; (c) if population education is integrated, there is the issue of a probable dilution of the message as well as the assessment of its impact; (d) since the majority of its audience is illiterate, educators must develop the kind of materials that will ensure communication of value-laden pop-

ulation education concepts at the grassroots level; (e) a core of minimum and adequate learning packages for different non-formal education and development programmes needs to be determined; and (f) there is a distinction between out-of-school population education and information, education communication (IEC), as out-of-school population education goes beyond IEC, which is the educational component of family planning.

The meeting came out with the following two recommendations with regard to curriculum development: (a) the conceptualization of population education for the last ten years was focused on a small size family norm, on demographic content, on population and development and family planning; and (b) there is a need to develop a minimum learning requirement to each subject area, grade level and target group.

Descriptors: *Comparative Analysis; Curriculum Planning; Regional Co-operation; School Systems; Non-formal Education; Integration Approach; Asia*

Source: Population Education Clearing House
Unesco Regional Office for Education in Asia and the Pacific
P.O. Box 1425, General Post Office
Bangkok 10500, Thailand

HOW ASIAN COUNTRIES INTEGRATE POPULATION EDUCATION INTO THE SCHOOL SYSTEM

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Unesco. Regional Office for Education in Asia and the Pacific. "Approaches to curriculum development in population education in Asia and Oceania," in: *Population education: a source book on content and methodology*. Bangkok, 1980, p.33-43. (Population Education Programme Service).

Different approaches for developing curriculum in population education have been used by different countries in Asia. Being of recent origin, population education has no clearly marked content boundaries. It is interdisciplinary in nature and related to various subjects. The problem of overcrowded curricula makes it difficult to establish population education as an independent subject in schools. Most countries have therefore used an integration approach to include population education concepts in different subject areas. To present an overview of how countries have undertaken this, the article presents a table of countries in Asia which are implementing population education programmes, showing the grade levels and the subjects into which each country is integrating population education concepts.

The table shows that almost all countries have used an integration approach and have followed a more or less similar design for developing their curriculum in population education. These include the following steps: (a) defining the goals of population education; (b) defining a conceptual framework; (c) identifying population education-related subjects for each grade; (d) developing scope and sequence in population education concepts; (e) developing instructional materials; (f) integration of population education in the existing curricula and textbooks or revised curricula and textbooks; (g) evaluation of curriculum and materials.

Although the overall goals of population education at the school level are more or less the same, there are differences

in the immediate objectives, content areas, subjects of integration as well as modalities and approaches for curriculum development. For example, the curricula in population education of Republic of Korea and the Philippines include content relating to sexuality and family planning, whereas other countries have avoided including them because of socio-cultural factors. To illustrate this comparison, the article presents a table showing the major content areas each country uses to integrate population education concepts into. It also appends a sample scope and sequence of population education concepts as integrated into various Korean subjects and grade levels.

Descriptors: *Comparative Analysis; School Systems; Educational Objective; Course Contents, Scope and Sequence; Integration Approach; Evaluation; Asia; Pacific Islands*

Source: Population Education Clearing House
Unesco Regional Office for Education in Asia and the Pacific
P.O. Box 1425, General Post Office
Bangkok 10500, Thailand

TRAINING POPULATION EDUCATION WORKERS IN THE PACIFIC

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Unesco. Regional Office for Education in Asia and the Pacific. *Development of instructional materials in population education in the Pacific.* Report of a Regional Training Workshop, Suva, Fiji, 8-21 September 1983. Bangkok, 1984. 358 p. (Population Education Programme Service).

The Regional Training Workshop on the Development of Instructional Materials in Population Education was held to provide opportunities to share country experiences in the development of in-school and out-of-school instructional materials in population education in the Pacific; prepare guidelines for the development of in-school and out-of-school prototype curricula and sample instructional materials and to develop the materials themselves. The first chapter was devoted to the results of experiences of the countries in the development of materials. Since some of the countries had very little population education at the present time, there was not much to describe in relation to development of instructional materials in population education for these countries. The major criterion the participants agreed on for the development of instructional materials was the usefulness for the Pacific region of any materials developed in the workshop. With regard to this, the participants enumerated several practical guidelines for developing instructional materials in the Pacific. These were to; keep the target audience in mind; use local teaching resources and materials; suggest practical Pacific examples and suggest alternatives for other Pacific countries; suggest interesting and relevant materials and methods, especially to involve students; and stress the limited resources and cultures of Pacific people in relation to population issues.

After deciding on the guidelines the participants divided themselves into two groups. The in-school group developed sample units rather than unconnected sample lessons which could be integrated into existing subjects. This was prompted by the potential immediate usefulness of units, which might be integrated into the existing subject areas more or less *in toto*. The sample units included the following

topics: (a) Unit 1 – Basic handbook on demography; (b) Unit 2 – Human growth and development; (c) Unit 3 – Migration and urbanization; (d) Unit 4 – Social and cultural values/land tenure; (e) Unit 5 – Population and environment; (f) Unit 6 – Population and national development; (g) Unit 7 – Health and nutrition; (h) Unit 8 – Quality of life. For the out-of-school group, three sub-groups were further formed, each developing materials for the following themes; (a) population and resources and their impact on family welfare; (b) population and employment/income and (c) population, health and family welfare. For theme 1, a leaflet was developed. For theme 2, posters and leaflets were prepared and for theme 3, a three-fold leaflet was developed and the out-of-school group prepared a questionnaire to survey the community, conducted the survey, analysed the results and drafted and discussed the report.

Descriptors: *Comparative Analysis; Materials Preparation; Instructional Materials; Non-formal Education; School Systems; Course Content; Pacific Islands*

Source: Population Education Clearing House
Unesco Regional Office for Education in Asia and the Pacific
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Bangkok 10500, Thailand

EXPERIENCES OF EIGHT ASIAN COUNTRIES IN POPULATION EDUCATION DEVELOPMENT

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Unesco. Regional Office for Education in Asia and the Pacific. *Development of out-of-school population education programmes: a synthesis.* Bangkok, 1980. 55 p. (Population Education Programme Service).

This document is a synthesis of the experiences of eight countries in developing and implementing their out-of-school population education programmes. They are Bangladesh, India, Indonesia, Pakistan, Philippines, Republic of Korea, Sri Lanka and Thailand. The synthesis focuses on a rationale for out-of-school population education programmes; the evolution of out-of-school population education programmes; curriculum and instructional materials development; personnel training for out-of-school population education programmes; research and evaluation; and the co-ordination of out-of-school population education programmes.

Curriculum development in the out-of-school population education is mainly characterized by the diversity of its target groups. Their ages, marital status, education and socio-economic profiles vary in wide degrees. The diversity is further compounded as they may be a captive or volunteer audience; and they may be available for varying periods of time for population education. Faced with this set of diversities, it is clear that no uniform curriculum content can be planned to take everything into account. There are a number of procedures being followed in curriculum and instructional materials development. These include a survey of the target group; identification of focal points for the curriculum; selection of content and learning experiences; and preparation and pretesting of instructional materials.

Some innovative projects included the family life education and functional literacy project of Thailand; a project being undertaken by Indonesia which incorporates population education in the

learning packages for non-formal education; and a project being undertaken by the Republic of Korea which uses diverse media to present the same population education content.

The various types of materials already produced and being produced for out-of-school population education programmes can be divided into two broad categories, namely: materials to promote awareness; and instructional materials. The basic differences between the two kinds of materials lie in the objectives underlying their preparation, the nature of the content and the impact it has on those who are exposed to them. The instructional methods used in the programmes generally emphasize the participation of target audiences in the learning process by requiring them to react to lecture presentations, to engage in large or small group discussions and report the substance of the discussions, and to practice problem analysis and decision-making procedures. The importance of examining traditional values in a group setting with reference to their relevance in the conditions of present day life is recognized.

Several countries have made attempts to integrate population education content into development programmes with varying degrees of success. The case studies showed that none of them is quite satisfied with what has been achieved so far, and that if population education programmes in the out-of-school sectors are to be launched on an extensive scale, a priority area that needs attention is the development of skills for preparing integrated curricula and materials. Workshops for developing skills in the development of curriculum and instructional materials have been undertaken by these countries. Generally, the instructional materials were prepared presenting the content in an integrated manner so that the integration of population education into the educational content of other development programmes had the advantages of focusing attention on the relevance of the population factor in the development process. Because of its controversiality, population education cannot be easily integrated in the content of certain programmes. A possible solution would be to regard the integrated population education content as providing a natural and relevant starting point to open up population issues, and then to use it as a springboard for drawing attention to important facets of reproductive behaviour.

Descriptors: *Comparative Analysis; Programme Descriptions; Educational Innovations; Non-formal Education; Materials Preparation; Asia*

Source: Population Education Clearing House
Unesco Regional Office for Education in Asia and the Pacific
P.O. Box 1425, General Post Office
Bangkok 10500, Thailand

TRENDS IN INTEGRATING POPULATION EDUCATION INTO THE SCHOOL SYSTEM

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Unesco. Regional Office for Education in Asia and the Pacific. *Future directions of population education.* Report of a Regional Consultative Seminar, Manila, 14-21 August 1978. Bangkok, 1978. 1976 p. (Population Education Programme Service).

This seminar provided the opportunity for the participants to co-operatively

develop new directions for qualitative improvements of existing programmes of population education and to suggest new innovative programmes for national and regional programmes.

Among the areas of needs that emerged in the discussion were: (a) awareness and orientation of personnel on the existence of the population problem and of the potential of population education as a means for coping with such problem; (b) curriculum and materials development; (c) training of personnel; (d) planning and co-ordination coherence of in-school and out-of-school population education programmes; (e) research and evaluation; and (f) a population education information network. This abstract focuses only on the area of curriculum and materials development.

Member States with national population education programmes consider population education as part and parcel of the total curriculum reform movement rather than treating it as a separate and isolated curriculum improvement activity. In some countries like Malaysia, Sri Lanka and the Philippines, population education programmes have been established as part of the Curriculum Development Centre. In the case of Bangladesh, Indonesia, Republic of Korea and the Philippines, there is a separate unit for it, but they work side by side with the other curriculum groups nevertheless. Countries have invariably used the integrated approach, although some have introduced population education as a separate subject at the secondary level. There is also variation among the countries as to the grade, content and subject disciplines for introducing population education.

The participants also discussed some problematic issues with regard to the programme. First, although there is common agreement as to the broader definition of population education, there are differences among the Member States as to the content of population education at the school level. Secondly, curriculum and materials developed using conceptual and sequential approaches to curriculum development lose their identity and focus when integrated in the subject disciplines. Third, there is lack of evaluation and research as to what content and methodology of teaching are most appropriate to change values and attitudes of children. Fourth, there is still resistance from some religious groups in some countries to the teaching of population education in schools; especially in the private religious institutions. In the non-formal sector, the concepts of population education, sex education and family planning need to be clarified in order to develop understandable content and relevant instructional materials. There was also lack of knowledge and skills to develop and produce appropriate teaching materials to meet the learning needs of a heterogeneous audience in the out-of-school sector.

To solve these problems, the participants recommended the following: (a) audio-visual materials should be developed along with a handbook for the development of audio-visual materials; (b) more Member States should develop their national source books on population education; (c) more prototype curricula should be developed and integrated in different programmes in the out-of-school sector; (d) training packages should be developed; and (e) a handbook on materials, methods and techniques of teaching population education should be developed. In terms of who should be responsible for implementing these recommendations, it was recommended that the Unesco Regional Office should conduct seminars/workshops to develop prototype curricula for the out-of-school sector, exemplar multi-media

packages on teaching/learning materials and exemplar resource materials such as handbooks, training manuals, guides and modules. On the other hand, the Member States should be able to adapt these prototype materials produced at the regional level; undertake periodic reviews of population education curriculum and materials for updating and improvement, develop population education courses at the tertiary level and national source books.

Descriptors: *Comparative Analysis; School Systems; Non-formal Education; Integrated Approach; Asia*

Source: Population Education Clearing House
Unesco Regional Office for Education in Asia and the Pacific
P.O. Box 1425, General Post Office
Bangkok 10500, Thailand

INNOVATIVE APPROACHES TO IMPROVE CURRICULUM DEVELOPMENT

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Unesco. Regional Office for Education in Asia and the Pacific. *Population education: innovative structures and approaches.* Report of a Regional Workshop, New Delhi, 28-29 October 1979. Bangkok, Unesco, 1980. 111 p. (Population Education Programme Service).

This Workshop enabled the countries with emerging population education to formulate alternative and innovative structures and approaches for more effective implementation of various aspects of their programmes.

The workshop discussed in depth, programme development and implementation, including research and evaluation; awareness and orientation of key persons and training of teachers and other personnel; curriculum and materials development and co-ordination with different agencies and administrative organizations. This abstract focuses on curriculum and materials development.

The curriculum and materials in population education should be mainly directed to value reorientation – the modification of values that are obstacles to development efforts. Some countries have established a curriculum section within a population education centre which is managed by population experts, subject specialists, curriculum planners and administrators which enables them to follow all phases of curriculum development. A second approach convenes many staff members from different sectors in a workshop to develop the curriculum materials on an ad-hoc basis. A third establishes a central committee on a temporary basis constituted by the Ministry of Education composed of population education experts and teachers from inside and outside of the Ministry. In some countries, a curriculum board is organized consisting of subject specialists to work out the curriculum. The introduction of population education into the school programme, basically involves integrated and separate subject approaches. The integrated approach takes the following forms: (a) sub-unit; (b) infusion; (c) permeation. The separate subject approach has the following forms: (a) elective subject; (b) mini-course and (c) required subject.

In the out-of-school sector, curriculum and materials development is undertaken through: (a) the centralized curriculum unit in the Population Educa-

tion Programme Centres; (b) an office for non-formal education existing under the Ministry of Education; (c) separate agencies; (d) workshops to prepare population education curriculum for integration in their programmes.

The workshop also concluded that instructional materials should be constructed in line with the aims of existing curricula and the objectives of the population education curriculum; in cases where population education concepts are integrated into an existing subject, the design and format should be consistent with that of the mother subject; and the application of the instructional techniques and the essence of the instructional materials must be well-linked. Some principles and strategies that can be employed in the production of instructional materials are (a) the content of population education should be information, conceptual, issue-oriented and inquiry-based; and (b) in order to obtain a wider spectrum of instructional materials, production of materials should be commission to experts. Writers or publishers should be invited to participate in the preparation of instructional materials in an open competition and encourage individual writers, publishers and materials producers to submit their work which can be made available for sale in the market.

Descriptors: *Educational Innovations; Curriculum Planning; Comparative Analysis; School Systems; Non-formal Education; Asia*

Source: Population Education Clearing House
Unesco Regional Office for Education in Asia and the Pacific
P.O. Box 1425, General Post Office
Bangkok 10500, Thailand

MINIMUM LEARNING EXPERIENCES IN POPULATION EDUCATION

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Unesco. Regional Office for Education in Asia and the Pacific. *Regional Workshop for the Development of Packages of Adequate Learning Requirements in Population Education, Chiangmai, Thailand, 17-30 July 1984; draft report.* Bangkok, 1984. 1 vol. (various pagings).

Population contents integrated in school subjects and non-formal education programmes have been inadequate in bringing about the desired attitude changes regarding population issues and problems. Population concepts tend to be spread too thinly in too many school subjects in both the formal and non-formal sectors, so the message is diluted and rendered less effective. This workshop undertook to develop prototype packages of adequate learning requirements for adoption or adaptation in the Member States and to develop guidelines for determining adequate learning requirement in population education.

The following were identified as core messages to be used as the content of packages of adequate learning requirements: (a) family size and family welfare; (b) delayed marriage; (c) responsible parenthood; (d) population change and resource development; and (e) population-related beliefs and values.

For both formal and non-formal population education, the following common guidelines were developed: (a) A good package should help realize the country's population policy and goals within the broader framework of socio-economic development; (b) It should be relevant to the needs and aspirations of the specific target audience as these relate to population issues and the improvement of the living standards of the people; (c) The

package should equip individuals to help make rational decisions to cope with population-related issues and problems; (d) The content of the package should comprehensively cover the core messages of the country's population information, education and communication programme; (e) The population knowledge base of the package should be accurate, up-to-date and convincingly presented so as to generate desirable attitudes and values regarding problems and issues; (f) The package should provide graphic and visual presentation; and (g) It should provide for assessment of effects on the target groups.

After formulating the guidelines, textual materials were developed on the following population concepts for the formal education sectors: (a) population change, food and nutrition; (b) marriage; (c) impact of population growth on environmental pollution; (d) world population growth; (e) population change and socio-economic development; (f) demographic and socio-economic indicators of development; and (g) socio-cultural values and family size. The non-formal group on the other hand developed samples of learning materials in the forms of posters, booklets, quizzes, charts, stories, flip books and booklets on the various aspects of the core messages.

It was recommended that in the formal sector: (a) participants to the Workshop should make an official report to the Head of their own ministries/ agencies upon their return to their respective countries regarding the new ideas generated during the Workshop; (b) the Population Education Programme Unit of each country should initiate an adaptation and/or development of packages of adequate learning requirements in population education based on local needs and conditions; and (c) the Population Education Programme Unit of each country should take appropriate action to get the core messages and materials integrated into the curriculum and textbooks.

For the non-formal sector it was recommended that: (a) the packages of learning materials developed in the Workshop should be brought to the attention of the concerned population education units in the respective countries for possible adaptation; (b) the office in-charge of non-formal population education in each Member State should take the initiative in developing adequate learning requirements in population education in collaboration with other concerned and relevant agencies; (b) the use of learning materials from learning packages on population education for the non-formal sector should be part of the national information, education and communication programme; (d) existing networks for distribution of population education materials should be strengthened to ensure that such materials reach the ultimate target groups; (e) to simplify the teaching/ learning process, priority should be given to the development of materials based on self-learning techniques; (f) as the development of adequate learning materials in population education requires specialized expertise, Unesco should provide continuous technical backstopping in this regard.

Descriptors: *School Systems; Non-formal Education; Materials Preparation; Asia*

Source: Population Education Clearing House
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Part Five: National Experiences on Curriculum Development in Population Education: A Literature Review

This Part includes 11 selections documenting the individual experiences of India, Nepal, Philippines, Bangladesh and the Republic of Korea in developing their curriculum on population education. Most documents describe the sequential procedures that the countries underwent to prepare their population education curriculum materials and the efforts taken to integrate them into the educational system. Developing the curriculum materials through a workshop has been the main modality used by almost all of the countries in the region. A few countries like the Republic of Korea and in some instances, the Philippines, India and Pakistan, have variously used the following approaches: experimental approach, committee approach or a combination of these approaches.

In the workshop approach, participants from various agencies engaged in population education activities are invited to first examine the existing textbooks and syllabuses to determine population education content already existing in these materials. This enables the participants to determine how much more is needed to enrich these textbooks and identify entry points for integrating population education concepts into appropriate subjects. Finally, while some countries stop at preparing a scope and sequence for population education contents and a conceptual framework and goals for the population education curriculum programme, other workshops develop actual sample lessons or curriculum materials like guides and manuals.

In the experimental approach, which is the main modality used by the Republic of Korea, curriculum development is undertaken on a very scientific basis. After a thorough study of the profile and needs of the target users and a content analysis of existing textbooks and materials, curriculum materials in the forms of lessons are prepared by an inter-disciplinary committee consisting of subject specialist coming from various disciplines. These materials are written and first validated by the subject specialists. Then they undergo pre-testing after which they are trial tested in the classroom. They are again subjected to repeated evaluation until they finally arrive in their final revised and acceptable form. The Philippines and a State in India on the other hand mobilize the involvement of experts and subject specialists by convening them into a committee to work on the curriculum materials. While some of the curriculum development activities undertaken by this committee go further into pre-testing of the materials on actual users, some recommend the materials for ready use in the classroom.

Because introducing population education into the educational system is a radical undertaking, India chose some modalities that took into consideration the fact that the secondary curriculum is already overcrowded and therefore this new curriculum area should take the minimum amount of classroom instruction time. In one document, the following recommendations were given from a workshop held in India for the personnel engaged in population education programmes: (a) formu-

late national minimum requirements in population education; (b) identify how best population education can be integrated into the existing school curricula without losing its identity; (c) incorporate only in a couple of subjects; (d) undertake a thorough content analysis of textbooks and curricula to precisely determine appropriate entry points for population education concepts; and (e) curriculum development should be undertaken in an inter-disciplinary manner calling for the involvement of teachers and experts from a wide range of disciplines to ensure proper blending of ideas into a meaningful whole.

The Philippine experience as documented in one selection provides a good review of the strategies used in curriculum development showing the decision points made by policy-makers in selecting from among a set of alternative strategies, why such decisions were made, the results of these decisions, problems encountered and what solutions were undertaken to solve these problems. The document has used a case study approach thus presenting a wealth of lessons learned.

Documentation of experiences of curriculum development of the countries included in this section usually highlight the following aspects: conceptual framework and structure of population education, goals and objectives, population education content used in enriching selected subjects in specific grade levels (which comes in the form of a scope and sequence); types of curriculum materials developed, teaching methodologies used; evaluation tools used for determining effectiveness of the curriculum materials and teacher training. While some documents make a complete and comprehensive description of all these components of curriculum development, a few focus only on some of these components.

TASKS AND CHALLENGES IN CURRICULUM DEVELOPMENT

48

India. National Council of Educational Research and Training. Population Education Unit. *Population education – tasks and challenges.* Recommendations of the Twin National Workshops cum Training Programmes held at Srinagar and Pune, 7-14 July and 16-23 July 1980. New Delhi, 1980. 46 p., appendix.

Participants of the two workshops discussed: curriculum development; preparation of instructional materials; orientation and in-service training; and evaluation and monitoring. This abstract deals only with the theme on curriculum development.

Indian states are at liberty to develop their own curricula and instructional materials, keeping in mind their own needs and requirements. The participants strongly feel that every State should try to ensure that it adopts or adapts the "national minimum" and suitably incorporates the same in its existing school curricula. The participants also looked into how best population education can be integrated into the existing school curricula without losing its identity or spreading it too thinly. They preferred to incorporate population education content and concepts in only a couple of subjects in each stage. However reinforcement of population education ideas through various subjects has also its merits. Subjects like languages and mathematics can be utilized for this purpose. States should undertake the content analysis of their existing school curricula as well as textbooks to find out the actual quantum and quality of population education content. The point of inquiry should be whether the content in its present form is adequate and has a sharp enough focus to convey the messages. It should also be able to identify suitable topics in the syllabus that can accommodate, in a natural way, concepts of population education. The fact that population education is an interdisciplinary subject calls for two actions: (a) involvement of teachers and experts from a wide range of disciplines; and (b) ensuring proper blending of ideas into a meaningful whole.

The introduction of population education in the school curricula automatically implies that population education should also find its place in the pre-service teacher training programmes of elementary and secondary teacher training institutes. In teacher education curriculum, the scope of population education may be slightly expanded to cover a bare minimum pertaining to sex education. At the elementary teacher training level, emphasis should be laid on creating awareness of the population problem and its repercussions on the everyday life of the individual, family and society. Similarly, efforts should be made to develop needed skills in the student teacher to integrate population education ideas in different school subjects and to be able to convey the population education message to the students in a language they can understand at a given level. At the secondary level, population education can occur in current problems of education, in educational planning and administration, in school health and administration or in methods of teaching different subjects. Development of curriculum, as a rule, is an on-going process. It calls for a review and refinement in the light of evaluation and feedback. The States should always scrutinize the soundness and effectiveness of procedures and

strategies adopted in curriculum development and its evaluation from time to time.

Descriptors: *General Discussion; Integration Approach; Teacher Training; Content Analysis; India*

Source: Population Education Unit
National Council of Educational Research and Training
Sri Aurobindo Marg
New Delhi 110016, India

INTEGRATED AND SEPARATE SUBJECT APPROACHES FOR INTRODUCING POPULATION EDUCATION

48

India. State Council of Educational Research and Training. Population Education Cell. *Population education curriculum for schools.* [Madras, 1983. 39 p.]

Population education may be introduced into the school programme through integrated or separate subject approaches. In the first approach, population education is integrated in various subject areas such as history, geography, science, mathematics and languages. The integration approach involves the preparation of teaching units to be added to existing units in the course syllabus of the subject area; the enrichment and expansion of existing units in the syllabuses of the accommodating subject areas to include population-related ideas; or overhauls selected subjects of the curriculum to allow for the permeation of relevant ideas. The Population Education Cell of the State Council of Educational Research and Training, Madras, believes that population education should become part and parcel of the total curriculum movement rather than treating it as a separate and isolated important activity. For this purpose, the Cell organized a workshop on curriculum development where participants scanned the contents of the existing textbooks published by the Tamilnadu Textbook Society at all levels. They studied the various units of the syllabus on the various subjects and identified the plug points for the selected population education concepts at three levels. They also evolved a format for the easy comprehension of the curriculum, stated the concept of population education, specified the plug-point in the existing subjects and the unit, and suggested guidelines for textbook writers in the form of "content". The curriculum on population education was prepared separately for primary, middle and secondary level.

Plug in points for population education are identified for Tamil, science, mathematics and geography at the primary level; geography, chemistry, language and biology at the middle level; while at the secondary level, a separate subject (population dynamics) is offered.

Descriptors: *Integration Approach; Primary School Curriculum; Secondary School Curriculum; India.*

Source: Director
Population Education Cell
State Council of Educational Research and Training
D.P.I. Compound
College Road, Nungambakkam
Madras – 600 006, Tamil Nadu
India

GOALS OF POPULATION EDUCATION CURRICULUM DEVELOPMENT IN BANGLADESH

50

Kabir, Md. Shamsul. "Population education curriculum", in: Bangladesh. Ministry of Education. Population Education Programme. *The national source book on population education.* Dhaka, 1983, p. 89-96.

The main consideration behind the inclusion of population education in the new curriculum in Bangladesh is that increasing population is the most significant of all the problems that plague the nation. It is, therefore, necessary that today's learner is made aware of the social and economic consequences of population increase. Population education has many goals including: (a) awareness of the causes of population increase and its effects upon the individual, the society and nation; (b) acquisition of competencies for scientific explanation and analysis of population problems; and (c) motivation for taking bold and rational decisions with regard to population problems. The significance of the objectives and the scope for their application should be borne in mind in preparing the curriculum and in adopting methods for actual classroom teaching. As a result of these goals, the outcomes of change in behaviour that are expected to take place in the learner, must be specific. The learner, for example, should be able to form an idea about the past, present, and future trends of population situation; describe the causes of population increase; explain the adverse effects of population increase upon the family, society and nation and collect and analyse comparative population statistics of different countries.

Learning materials for population education should be selected according to certain guiding principles, namely; (a) to select materials in consistent with social and religious values; (b) to integrate materials with contents of existing subjects; (c) to choose population issues and problems from real life situation; (d) to serve the specific purpose of inspiring the learner with inquisitiveness and provoke him with new thoughts and considerations; and (e) to enrich population education curriculum through research and investigation.

In order to achieve the objectives, the content areas should include: (a) historical facts about population, the manner of population change and future trends of population; (b) national and international population statistics and related facts, such as population figures of developing and developed nations; (c) geometric facts including birth and death rates, migration and immigration, dependency ratio, and life expectancy; (d) socio-economic problems arising from population increase; (e) comparative statistics and explanation and analysis of the population situation in national and international perspectives; population education is officially recommended for inclusion in Bengali, mathematics, environment studies, general science, social science, work-oriented education, civics, economics, geography and home economics. Teachers are free to choose the teaching methods most appropriate, using carefully selected teaching aids related with the objectives and materials of a given lesson. These should help to increase the learner's knowledge and skills; be appropriate for the learner's age and level of mental development; be easily available and convenient; and be prepared by the teacher as well as the pupils from inexpensive local materials. Finally, the chapter also briefly discusses the importance of research and evaluation and teacher training for curriculum development.

Descriptors: *General Discussion; Educational Goals; Materials Preparation; Course Contents; Integration Approach; Teaching Methods; Bangladesh*

Source: Executive Director
Population Education Programme
Ministry of Education
House No. 62, Road No. 7/A (New)
Dhanmondi R.A.
Dhaka-9, Bangladesh

DEVELOPING THE CONCEPTUAL STRUCTURE OF POPULATION EDUCATION

51

Korean Educational Development Institute. *Approaches to curriculum organization for population education.* Seoul, 1975. 73 p. (KEDI research report no. 19)

This study is intended to identify the specific methods of organizing the population curriculum which would help the schools – primary, middle and high – promote population education in a more effective way. The specific objectives are to: (a) develop the conceptual structure of population education; (b) analyse the population contents within the existing curricula in light of the conceptual structure and to identify the problems associated with the curriculum organization; (c) present the criteria for organizing the population education; and (d) to present the table of sequented contents for population education.

Within the context of these objectives, this study was conducted largely through an extensive analysis of literature and a series of consultations with the specialists representing a wide range of disciplines. The conceptual structure of population education is a body of knowledge and concepts of population goals, composed of six content areas – human reproduction and family planning, family sizes and standards of living, population and the environment, population and the economy, the effects of population phenomenon on human life, and population policy and programme. These areas are represented by 31 generalizations, each incorporating a number of sub-contents. An extensive analysis of the existing curriculum was conducted to determine whether the population content is comprehensively covered and whether it is systematically organized. The 31 generalizations in the conceptual structure served as the criteria for the analysis. To illustrate specifically, the population elements comprising the generalizations were identified in terms of their distribution and coverage scope in the existing subjects or topics.

All in all, the study found that the existing curricula leave ample room for the reinforcement of population content, based on the conceptual structure of population education. There are also possibilities of producing latent effects through using population data or materials for teaching those subjects or topics, which are not related to population. The document presents a time-table which indicate time allocation for the various subjects and grade level and presents a table showing the type of course preferred for each subject and grade level. It is also suggested that, besides textbooks, a variety of instructional/learning materials be prepared and diffused to the teachers, which demands that the training of teachers precede any other tasks in the population education programmes. Curriculum organization and material development must be undertaken by the teachers who have already been trained in population education.

The promotion of population education within formal education systems requires institutional arrangements and support which would advance a systematic addition of new population elements to the existing curricula. Studies must be conducted to provide information and data useful in developing curriculum for the collegiates and adults. A study must be conducted on the organization of latent curriculum for population education and the results of the study validated through a series of field-trials.

Descriptors: *Curriculum Evaluation; Curriculum Planning; Primary School Curriculum; Secondary School Curriculum; Content Analysis; Republic of Korea*

Source: Population Education Project
Korean Educational Development Institute
20-1 Umyeon-Dong
Gangnam-Gu, Seoul 135-00
Republic of Korea

GOALS AND CONTENT OF NEPAL'S POPULATION EDUCATION CURRICULUM

52

Nepal. Curriculum, Textbook and Supervision Development Centre. Population Education Unit. *Population education curriculum: school level (scope and sequence).* Report of the Workshop to Review Draft Curriculum on Population Education, 29 April – 6 May 1984. Kathmandu, 1984. [22 p.]

The workshop enabled participants to review a set of goals for population education at school level in Nepal; a set of population contents to be used in enriching the curriculum at different school levels; and the scope and sequence on population education and to analyse the contents of relevant textbooks of different subjects at different grade levels.

The workshop participants reviewed the scope and sequence in population education for the primary level, lower secondary level, and upper secondary level. The identified primary level objectives were to (a) provide knowledge of simple demographic concepts; (b) help recognize the relationship between family and community sizes; (c) enable the child to understand his environment in relation to his basic needs such as food, health, clothing, housing and education; (d) develop an understanding of the evil effects of over population on the environment (specially in the context of family and community); (e) develop an understanding of rapid growth of population and its causes; the influence of population growth on the various aspects of human life, and some demographic concepts like in-migration and out-migration; (f) develop an attitude of responsibility and co-operation in respect to personal hygiene and family living; and (g) develop, an appreciation of the relation between population size and quality of life.

At lower secondary level, the objectives were to: (a) acquire knowledge of basic demographic concept and process; (b) develop understanding of population size and composition; (c) realize that population size and rapid population growth affect food and nutrition, health, educational and employment facilities; (d) develop understanding of how over-population affects environmental sanitation; (e) recognize the interrelationship of population change and economic and social

development; and (f) create awareness about the population situation in Nepal.

The objectives formulated for the secondary level were to: (a) develop an understanding of biological factors and the phenomenon of human reproduction and parental care which are responsible for the continuation of the species; (b) be familiar with a basic demographic vocabulary so as to be able to read and interpret demographic material with some understanding; (c) understand some demographic concepts: fertility, mortality, migration and growth rate; (d) understand the determinants of fertility and mortality in Nepal; (e) recognize that rapid population growth affects aspects of quality of life such as food and nutrition, housing and other social services; (f) understand the impact of increase in population on natural resources and the need for conservation; (g) develop favourable attitudes to population issues and problems in relation to religious beliefs, practices and socio-cultural values; (h) develop an appreciation of the small family norms as proper and desirable and the relationship between population size and quality of life; and (i) develop an awareness of population policies and programmes of the country and other countries.

Descriptors: *Curriculum Outline; Secondary School Curriculum; Scope and Sequence; Educational Goals; Nepal*

Source: The Chief
Curriculum, Textbook and Supervision Development Centre
Ministry of Education and Culture
Harihar Bhawan, Pulchowk, Lalitpur
Kathmandu, Nepal

MULTI-DISCIPLINARY APPROACH TO POPULATION EDUCATION

53

Pathfinder Fund. *Curriculum in population education for secondary school stage.* New Delhi, 1972. 32 p.

Population education is of recent origin. It has emerged as a new curriculum area at the school stage as a result of socio-economic needs. The curriculum content of population education is to be drawn from disciplines like economics, geography, biology and demography. The nature of population education is multi-disciplinary and its curriculum can be interwoven into a variety of subjects. While developing the curriculum for population education, two important factors are to be kept in view. This is a subject through which not only knowledge, but also new attitudes and values, are to be inculcated. The secondary curriculum is already overcrowded and therefore this new curriculum area should take minimum amount as possible of classroom instruction time.

The phenomenon of population explosion has a variety of implications regarding the quality of life in the family, in the nation and in the world. Measures for controlling population are necessary for personal and community welfare. In order to achieve these personal and social goals, the overall curricular objective of school education, especially that of secondary education is to create an awareness of these problems among school children and develop in them appropriate attitudes and values. The overall goals of population education are to: (a) develop understanding about the dynamic character of population; (b) acquire knowledge of essential terms and concepts related to population study, such as birth rates, death rate, migration and growth rate; and (c)

develop insight into the relationship between implications of population growth and the quality of life in the family and the nation.

The content outline for population education includes: elements of demography and population dynamics; population trends in the world; population trends in India; implications of population trends in India; and population equilibrium. The time required for teaching these content or units may vary from class to class. The major content area or units are further elaborated upon with sub-units. The total curriculum in population education consists of classroom instruction and co-curricular or additional activities. The classroom instruction initiates the study of population trends and their implications. However, the development of values and attitudes cannot be accomplished by a brief course inside the classroom. Activities such as the following should become an integral part of the total curriculum and carefully utilized: (a) bulletin boards; (b) lectures, debates and essay competitions; (c) dramatics; (d) exhibitions; (e) film shows; (f) library; (g) special projects; and (h) population study clubs. Evaluation of pupil achievement in the area of population education should also be treated as an integral part of the curriculum.

Descriptors: *General Discussion; Secondary School Curriculum; Social Values; Educational Goals; Course Contents; Curriculum Evaluation; India*

Source: The Pathfinder Fund
C-24, Green Park Extension
New Delhi – 16, India

CURRICULUM DEVELOPMENT ON POPULATION EDUCATION CHARACTERIZED AS INTERACTIVE

54

Philippines. Ministry of Education and Culture. Population Education Programme. *Curricular materials in population education developed in the Philippines*. Manila, 1982. 22 p.

Innovations in the school programme such as the introduction of population education create a corresponding need for new curriculum materials for both teachers and pupils. In response to this need, the curriculum and materials development at the Population Education Program is an interactive process among the multi-disciplinary and multi-ethnic members on the curriculum, training and research components. It is interactive in the sense that the curriculum staff prepares the materials; the training staff trains the teachers to utilise the materials; and the research staff takes care of the research studies to gather baseline data for the preparation stage and the gathering of feedback for the improvement of the curriculum materials. The Population Education Program staff had the novel task of arriving at a definition of population education which served as the framework for identifying the main ideas and the facts from the content of population education.

Five major areas of content for population education were selected after considering the nature of population education, the needs of society and the socio-cultural orientation of the target clientele. A scope and sequence organised around these major areas, i.e. demography,

determinants of population growth, consequences of population growth, human sexuality and reproduction and planning for the future, was developed from which was drawn the specific contents that could be integrated in social studies, health, science, home economics and mathematics at the elementary and secondary levels. This scope and sequence served as the source of content for the development of different curriculum materials in population education.

Teachers' guides, course syllabuses, student references and other materials for general use have been developed as a result of this curriculum development programme. In the development of the teachers' guides, the following steps were followed: (a) in-depth training in population education of staff and curriculum writers; (b) analysis and study of local and foreign materials on population education; (c) formulating a definition of population education; (d) deciding methods of integration in the formal school curricula and levels of implementation; (e) setting up the four main educational goals of the Population Education Program; (f) selection of content in terms of the objectives of population education and the needs of Philippine society; (g) determination of scope and sequence of population education; (h) getting reactions from students on tentative scope and sequence; (i) preparation of the sub-units; (j) evaluation of sub-units by content specialists and curriculum experts; (k) getting community reactions on controversial topics of sub-units; (l) refinement of the sub-units; (m) field-testing of sub-units; and (n) continuous revision based on feedback from teachers. At the tertiary level, materials are divided into those for teacher training and those for arts and sciences. A *Population education course syllabus* for a 3-unit course in teacher education was prepared. Its preparation comprised: (a) gathering baseline data through KAP survey of third and fourth year college students in selected teacher training institutions; (b) development of content areas; (c) critique by instructors who attended the training programme in population education; (d) revision of content areas in terms of emphasis as suggested by the instructors; (e) development of the three-unit course; and (f) development of the Resource Book. Curriculum materials development is always undertaken through a workshop at which teachers and curriculum developers participate. Evaluation always forms part of the total process.

Descriptors: *General Discussion; Materials Preparation; Scope and Sequence; Philippines*

Source: Population Education Program
Ministry of Education Culture and Sports
Palacio del Governador on Aduana St.
Intramuros, Manila
Philippines

PROCESSES FOR CURRICULUM DEVELOPMENT TRIAL TESTED

55

Rao, K. Seshagiri. *Development of curriculum on population education for school children.* New Delhi, The Pathfinder Fund, 1969. 1 vol.

In early 1968, the need for curriculum development in population education was first felt by Dr. Etton Kessel of the Pathfinder Fund. This need materialized in a project to develop curriculum and instructional materials on population; test the curriculum in the school situation,

and evaluate the curriculum in order to determine its effects on the students, teachers and parents. Curriculum development being a complex task and a multi-dimensional process, the overall development of the curriculum was entrusted to one educationalist and a team of social scientists. To make curriculum more meaningful, an inter-disciplinary approach was introduced. The process was conducted by first studying the literature on curriculum development. After gaining some knowledge on curriculum preparation, the processes involved were further discussed with the experts in the field of curriculum as well as with some teacher educators. Also, in order to have some idea of the magnitude of the information needed by the students, discussions were held with the education officers, principals and teachers. Based on these, the general concepts, goals and sub-concepts were revised. Considering the multi-faceted approach to population education and the complex human learning situations involved therein, an attempt was made to exploit fully the experiences of the social scientists. The draft outlines on a particular area prepared by a social scientist was looked into by other social scientists, individually and by the educational consultant.

Each one of these 'areas' was provided with a general concept followed by 'goals', which were further divided into specific 'concepts', on the basis of which 'units' were developed in order to prepare the lesson plans. It was decided to prepare 30 lessons, i.e. six lessons from each area. These lessons were to be prepared by the educationalist and one of the social scientists working exclusively on the 'area'. The study of the existing syllabuses and the theoretical developments in the field of curriculum provided much needed experience.

The collected material will be used for the purpose of providing the content of the envisaged six lessons in each 'area' and also for the following purposes: (a) development of curriculum for students at different class levels; (b) development of the source materials for teachers; (c) development of learning aids for students; (d) bibliography on these areas; and (e) teaching aids for non-student youth. As it is intended to develop curriculum at various class levels, there were two alternatives open, either to start from the nursery and develop the contents up to the higher secondary, or to start from the higher secondary and dilute the information gradually through the nursery level. It was decided to start the lesson plans at the higher secondary level. It was not possible at the outset to determine the exact minimal information to be given at the nursery level as it would be the starting point and would not help to decide the magnitude of information to be collected ultimately. Students at the higher secondary level will be leaving school sooner and the delay in developing lesson plans to this group would not reach students who would possibly soon be getting married.

Descriptors: *General Discussion, Educational Levels; Course Contents; Educational Goals; India*

Source: The Pathfinder Fund
C-24, Green Park Extension
New Delhi – 16, India

CURRICULUM DEVELOPMENT EFFORTS OF SIX INSTITUTIONS ON POPULATION EDUCATION

56

Reyes, Felicitas A. *The Philippine experience in curriculum development for*

population education: the state of the art. Manila, Population Center Foundation, 1976. 83 p. (Population Education Research Utilization monograph series 1; part 1).

This monograph describes the curriculum development efforts of six institutions in the Philippines engaged in population education activities. The large part of the paper, however, reviews the efforts of the Population Education Programme of the Ministry of Education, Culture and Sports which is in charge of the national population education programme in the country. The monograph contributes to the curriculum reform movement in population education; the recording and analysis of the processes and problems involved; the alternative strategies considered; and the decision points arrived at by specific agencies and sub-systems in the educational system.

Population education is integrated as sub-units into social studies, health, science and home economics in the elementary and secondary levels. Only in teacher training colleges is it introduced as a single elective course. For the elementary level, the Population Education Programme followed essentially the approach of infusion or integration. The arguments for the integration or infusion approach were: (a) the already overcrowded curriculum made new, discrete, self-contained single courses impracticable; (b) the feasibility of using the same teachers instead of hiring additional ones; (c) content spread throughout the entire period of schooling would create more impact than a single one-shot course. Although the infusion approach is the most accepted and preferred by the majority of the teachers, other alternative approaches were also recommended. These include: (a) separate course; (b) unit study or mini-course; (c) "teacher-dependent" course; and (d) self-learning activity packages. The Population Education Programme (PEP) decided to introduce the course at the elementary, secondary and normal school levels in all public, private and vocational schools, starting from grade I, because (a) there is a high dropout rate after grades V or VI; (b) the biggest enrolment is at this level; (c) children develop attitudes early and are already very inquisitive and exposed to matters of sex at an early age; (d) pupils from low-income groups, where the tendency is towards big families, make up the bulk of the elementary school pupils; (e) those eligible for marriage are reached before they leave elementary schools; (f) there are more teachers in the elementary level who can be tapped to teach population education. However, there were also those who argued for introducing population education at the secondary level for the following reasons: (a) the complex and controversial character of materials for population education and the level of maturity required to understand them; (b) it is the high school graduates who will dominate society's future leaders and the dropouts can be taken care of by out-of-school youth educators; (c) students are closer to the age of marriage.

The philosophy adopted by PEP revolves around the concept of quality of life. The goal is to make the young realize that socio-economic development balanced by a moderate growth rate can facilitate the development of a higher quality of life for the nation and that a small family size can contribute to the quality of living. Towards this end, the PEP aims to affect knowledge, attitudes and skills regarding five major topics: demography, determinants of population growth, consequences of population growth, human sexuality and reproduction and planning for the future.

Generally, the teachers are satisfied with the PEP curriculum guides, which they say have a good mix of macro-level (demography and population change) and micro-level (personal aspects such as family size). The topics most favoured among teachers is human sexuality. The teachers reported encountering difficulties in integrating population education into the subjects for the following reasons: (a) teacher overload; (b) dearth of materials; (c) lack of time within the existing curriculum; (d) incompetence and negative attitude; (e) lack of knowledge of strategies in teaching sub-units; (f) lack of administrative support; and (g) parents' conservation. To solve these problems, the teachers recommended the following: (a) localize the curriculum guides; (b) translate the guides into dialects; (c) train teachers more on the discovery approach and values clarification strategies; (d) conduct on-going evaluation; (e) train teachers.

Descriptors: *General Discussion; Primary School Curriculum; Secondary School Curriculum, Integration Approach; Educational Goals; Course Contents; Philippines*

Source: Population Information Division
Population Center Foundation
P.O. Box 2065
Makati Commercial Center
Makati Rizal, Metro Manila
Philippines

APPROACH TO CURRICULUM DEVELOPMENT IN POPULATION EDUCATION

57

Tribhuvan University. Institute of Education. *Population education curriculum in teacher education; workshop report.* [Bhaktapur (Nepal), 1981]. 22 p.

This workshop was aimed at developing a population education curriculum in teacher education. Specifically, it also enabled participants to develop overall objectives of population education in teacher education; prepare a set of population education content to be used in enriching the social studies courses at certificate and diploma levels; and analyse the existing courses of geography, economics, history, political science and social studies.

The participants of this workshop discussed at length the proper approach to be adopted in the process of curriculum development on population education for teacher education. The discussion centered around the question of whether separate courses on population education are to be developed or the fundamental concepts of population education integrated into social studies and social science courses. The workshop participants reviewed all the available courses in social studies and social science courses to find out the plug-in points to integrate population education concepts meaningfully. The appropriate learning units were identified. The participants unanimously decided to integrate the population education concepts into social studies, history, geography and economics.

The following recommendations were formulated after the deliberations: (a) there is a need for short term training for the teachers in social studies and social sciences who are teaching in different campuses of the Institute of Education, to enable them to teach integrated courses; (b) there is a need for the development of textual and audio-visual materials to enrich teaching in this new field; (c) higher level training for the campus teacher should be

provided to facilitate rapid development of the training programme at the campus level for quality teaching on population education; (d) empirical research studies should be conducted so as to build up the foundation of population education related to the Nepalese context; (e) the workshop recommended getting the revised courses on social studies, history, geography and economics approved from the faculty board for implementation; (f) population education concepts should be integrated into social studies and social sciences such as, history, geography and economics. Other subject areas such as, mathematics, science, health, home-science should also be explored for integration with population education concepts in relevant unit.

Descriptors: *General Discussion; Teacher Education; Educational Objectives; Course Contents; Integration Approach Nepal*

Source: Institute of Education
Tribhuvan University
Sanothimi, Bhaktapur
Nepal

WHY IT IS DIFFICULT TO INTRODUCE SEX EDUCATION IN THE SCHOOLS

58

Villanueva, Carmelita L. *Introducing human sexuality into the population education curriculum*. Manila, Population Center Foundation, 1976. 68 p. (Population Education Research Utilization monograph series 1, part 3).

This paper focuses attention on some problem areas that hamper the introduction and acceptance of sex education in schools. Hopefully, this would help teachers, administrators and researchers explore and examine existing models, research results and their classroom and field experiences. Sex education is a highly controversial issue. As such, it is widely felt that integrating human sexuality into the population education curriculum will only jeopardize the acceptance of the total population programme. But based on research conducted in the Philippines and elsewhere among parents, teachers and students, there is an apparent need for sex education in school and at home. However, debate still rages on the wisdom of integrating sex education in the population education programme.

The first issue dealt with is when to introduce sex education. A content analysis of existing curricula on human sexuality reveals that there is no agreement as to when sex education should start. Wesleyan College, for instance, starts off its programme with grade IV students, and the Philippine Women's University and the Science Education Center in high school. However, the Department of Education and Culture sees the need to introduce sex education as early as grade I. At Wesleyan College the topic of contraceptive methods is considered appropriate for elementary pupils; other schools prefer to defer it until high school. Local KAP studies show that students, parents and teachers seem to agree that the elementary level is the most appropriate time to initiate sex education. But there are significant differences of opinion on exactly when to do so – in grade I or in the upper elementary level. Most of the opposition comes from parents who feel their children "are still too young to see, know and mention the sex organs and the reproductive process". Teachers and supervisors, however, agreed that the topic of genitalia is appropriate for grade I and that contraceptive methods should be taught to students in the upper elementary levels. Policy planners and researchers felt

the elementary years may not be the ideal time to introduce detailed knowledge of contraceptives, but since most school children in the rural areas drop out before finishing grade VI, there seems to be little choice other than to introduce the subject, with appropriate treatment at each grade level. They recommended that curriculum writers and teachers must ensure proper treatment of the topic and that a detailed discussion of contraceptive methods at this stage is inappropriate as it is not immediately relevant and the pupils may quickly forget it.

As in Western countries, where sex education starts in grade I, the PEP covers the following topics in the primary grades: family relationship differences between boys and girls, and how babies are born. At the upper elementary level or the intermediate grades, the following are developed to help prepare students for adolescence: changes in boys and girls in puberty, human anatomy and reproduction. At the high school level, more emphasis is placed on boy-girl relationships and healthy sexual attitudes, pregnancy, contraception and responsible parenthood. Parents, teachers and students who were respondents in the KAP studies on sex education also generally concurred that the topics for the elementary level are suitable for their children. They also looked favourably on the aspects of sex topics which are being taught to high school students with the exception of teaching scientific terms for the genital organs to grade I pupils and of contraceptive methods in grade IV as prescribed in the Wesleyan College population education curriculum. The studies also revealed that such topics as menstruation, human reproduction, contraception and masturbation are difficult either to teach or to understand. As a result, these topics are least liked by the class or embarrassing for the teacher to discuss.

Sex education authorities pinpoint several possible teaching approaches. First, purely factual and scientific. Second, the strong moral approach. Third, teaching all the facts and attitudes and leaving conclusions to the student. Fourth, giving all the facts and attitudes but making a stand and making recommendations. Some teachers and supervisors believed students should be given all the facts about attitudes on, and the moral implications of, human sexuality – and to be told which to follow. On the other hand, a purely ethical approach would leave little of the decision-making to the students. This will serve to thwart the basic goal of population education which is to inculcate in these students the ability to make responsible decisions. The supervisors said this approach would be appropriate because of the fast changing moral code of today's youth but that it would have difficulty reaching students who are bolder and more philosophical in their outlook. However, other teachers and supervisors proposed that topics which lend themselves to factual treatment should be treated on a strictly informational level; those that require ethnical treatment should be taught on a moral level.

The other two issues deal with terminology and teacher competence. The dilemma that has long faced teachers and family planning communicators is: should they use scientific terms at the risk of not being understood, or should they use the popular terms and be accused of vulgarity? Or should they resort to euphemism which will likely result in the miseducation of the students? Perhaps the more crucial questions however are: should there be a standard set of terms based on one of the three categories already mentioned? Which set of terms would be most applicable, most widely understood, and most acceptable in those parts of the country where it

will be introduced? With regard to teacher competence, a major problem both here and abroad is the lack of confidence among authorities, parents, students and the teachers themselves in the teacher's competence and readiness to teach human sexuality. They are frankly apprehensive about allowing the teacher to play a major role in the sex education on the youth. The problem can be resolved through the following recommendations: (a) teachers of human sexuality should have the following qualifications: open-mindedness; emotional maturity; good moral character; knowledgeability in content and methodology; acceptance of the Population Education Programme's objectives; intensive training in population education; be happily married. If single, he or she must have had a pleasant and morally upright family life; respect and reverence for sex and institution of marriage; can communicate sincerely and honestly and must have affection for children; (b) they must be trained teachers; and (c) parents must be involved.

Descriptors: *Integration Approach; Sex Education; Course Contents; Teaching Methods; Terminology; Philippines*

Source: Population Information Division
Population Center Foundation
P.O. Box 2065
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Makati Rizal, Metro Manila
Philippines

Part Six: Research and Evaluation in Curriculum Development in Population Education: A Literature Review

Out of the 13 studies, eight deal with development of prototype teaching units and their evaluation; three with content analysis of textbooks and curriculum materials, one is a survey to examine how population education can be integrated into home economics and one is a consultant's evaluation of population education sub-units. These studies were undertaken by the Republic of Korea, Thailand, Philippines and Malaysia.

Majority of the studies evaluate the effectiveness, acceptability and feasibility of the implementation of the curriculum or teaching units in subject areas where population education has been integrated. To do this curriculum developers usually convened a meeting to design and develop draft curriculum materials on population education. These draft materials were pretested on a small sample of users. Once they were revised, they were tried out in an actual classroom situation. The effectiveness of the population education curriculum units was determined by measuring changes in the knowledge and attitude of students. The effectiveness of the materials, especially factors contributing to the teachability, was also determined through a survey of teachers' reactions and comments, using questionaires and interviews.

This section also includes three studies which analysed the content of textbooks in order to identify topics related to population matters which can be used as plug-in points for population topics. The following questions are usually asked: to what extent are population topics included in the current textbooks? To what extent are the topics and sub-topics covered in each subject areas? How are the population topics treated in each book – systematic, semi-systematic, casual or non-syntematic? How is the presentation of the population topics classified – pro-natal, anti-natal or neutral?

One study was undertaken by Unesco using nine countries from Asia as respondents to determine the feasibility of integrating population education contents with a curriculum area, i.e., home economics. The study surveyed the possible entry points in home economics with which population education contents can be integrated.

This section deals with two types of samples – the textbooks and teaching units used for content analysis and the various personnel who were asked to react and comment on the different curriculum materials. The majority of the content analysis studies used most, if not all, of the textbooks used in both elementary and secondary schools across all the subject areas. A few focused only on textbooks used in certain grade levels. As for the sample respondents who reacted to the effectiveness and acceptability of the curriculum materials and teaching packages, certain sample groups were located in one specific school and classes where the teaching packages were tried out while some were selected from several schools in one province or one region. One was a nationwide sample of teachers selected

through simple random procedures while the international study selected various types of personnel engaged in home economics from nine countries in Asia.

Based on an analysis of the studies, the following generalizations can be made:

1. Topics concerning population issues occupied a relatively small portion of the existing textbooks in the schools. However, it should be noted that this finding is based on five surveys which were undertaken before or during the first stage of population education programmes when countries were just starting to undertake curriculum development programmes. The proportion of population education topics ranged from 0.37 per cent to as much as one-third of the entire subjects studied.

2. Most often, these topics were treated in a simple and casual manner, meaning that there was no careful and well thought-out plan undertaken to systematically interrelate population content with the subject area content.

3. Social studies was the most frequently mentioned subject area which took up population content more extensively than the others.

4. The population topics which were most frequently taken up or treated more comprehensively than the others include the following: (a) population growth and natural resources; (b) demographic factors and data; (c) determinants of population growth; (d) man and the environment; and (e) facts of population phenomenon. On the other hand, the population topics which had been least dealt with consist of the following: (a) fertility; (b) sexuality; (c) study and understanding of population situations and problems and ways of solving these problems. However, an analysis of the population content in each subject area in the Philippines showed that fertility was mentioned in all the five subject areas which integrated population education; sexuality and reproduction were taken up in health and science; population concepts and demography were taken up in the five subjects while migration was taken up only in social studies.

5. While three studies showed that the population content was not appropriate to the objectives and the subject areas with which it was integrated, one study revealed that the content was very appropriate to classroom teaching. Two studies from the Philippines and Korea even identified topics which were not relevant or which should be revised. However, there was a clear indication for a need to update data regularly and treat some topics more comprehensively.

6. There was a general consensus found in the studies that the time allotted to the implementation of the curriculum unit was too short and needed to be lengthened.

7. It was also found in almost all of the studies that the terminologies and language used were difficult to understand. Simplification was suggested.

8. There was a consensus about the inadequacy of exercises and activities in the classroom situation. Comments ranged from "there should be more detailed

explanation to the teachers on how to carry out some activities"; to "if one activity is too difficult to do, alternative activities should be given"

9. The inadequacy of reference and teaching materials for the use of the pupils and the teachers was another common finding. If not all of the materials can be given, it was suggested that a comprehensive list of materials and suppliers should be given to the teachers.

10. Many curriculum materials lacked inquiry and discovery-oriented approaches. It was suggested that a summary of the various teaching methods should be given including an explanation of how each works.

11. One regional survey was undertaken of India, Indonesia, Iran, Malaysia, the Philippines, the Republic of Korea, Singapore, Sri Lanka and Thailand, to determine the feasibility of introducing population education into home economics. The findings showed that: (a) home economics is rich with topics that can serve as entry points for population education; (b) there were two models of home economics – one involved housework, cookery and needlework for girls, while the other, for boys and girls, involved skills such as decision-making, problem-solving, managerial skills and the sharing of responsibilities among the members of the family – this latter model can be used for integrating population education; (c) the following home economics topics were found to be good entry points: food and nutrition, clothing, home management, housing and family and child development; (d) the most frequently used methods were lecture and individual project – more problem-solving, discovery-oriented methods should be used; (e) teaching materials in home economics were scarce – more should be produced; and (f) more than half of the teachers of home economics were insufficiently trained – pre-service and in-service training should place more emphasis on methodology.

ANALYSIS OF TEXTBOOKS FOR POPULATION – RELATED CONTENTS

59

Central Education Research Institute. *Curriculum development for population education in social studies through grades I-III.* Seoul, 1972. 113 p. (CERI research edition no. 63)

This study was conducted to analyse trial textbooks and related textbook materials in social studies through grades I to III as a basis for the development of textbooks and teachers' guides and to pretest the teachers' guide developed in a workshop. The materials studied were trial textbooks of social studies and related textbook materials for grade one to three in elementary school. The study also tried out the teachers' guides which had been developed in one of the designated Experimental Schools on two grade III classes. The textbooks on social studies were content analysed to suggest suitable contents for the revised textbooks and teachers' guide for population education. Then a meeting was held with textbook compilers and authors assigned to revise the textbooks and to provide them with guidelines for revision. Then, in order to examine whether the teachers' guide developed was adoptable in schools, a field test was conducted in two grade III classes. The whole study included an analysis of the textbooks and revised curriculum, a workshop to develop the revised materials and trial of these developed materials. The findings show the following:

(a) *Objective of population education.* As a result of the study, a set of instructional population education objectives for elementary schools in general and for grades I to III were set up through the joint work of the research team and the textbook compilers and authors;

(b) *The content of population education.* The content of population education to be integrated in social studies through grades I to III were classified into two parts: the directly related content for the trial textbooks and the indirectly related content;

(c) *The teachers' guide of population education.* The teachers' guide for grades I to III was developed with the cooperation of the textbooks compilers and authors. The material contained instructional directions and effective teaching-learning materials and strategies.

Descriptors: *Textbook Analysis: Content Analysis: Social Studies; Primary Grades; Field Tests; Republic of Korea*

Source: Population Education Project
Korean Educational Development Institute
20-1 Umyeon-Dong
Gangnam-Gu, Seoul 135-00
Republic of Korea

PILOT TESTING OF POPULATION EDUCATION IN THE ELEMENTARY AND SECONDARY SCHOOLS

60

Central Education Research Institute. *Curriculum improvements for population education in the elementary and secondary schools of the Republic of Kor. – the second stage final report.* Seoul, 1972. 238 p.

This is the second stage of a series of projects being undertaken to introduce population problems into school education. The objectives were to: a) establish a firm

foundation of population education with a relative rationale; b) establish educational objectives of population education for one subject area of one grade at each school level; c) establish content outline according to the specified educational objectives; d) develop prototype units based on the established content outline; and e) provide detailed instructional materials on population education to curriculum and textbook co-ordinators and textbook authors, and further to show a direction for population education to those who will be practically engaged in this critical education in the formal school system.

The study was carried out in five stages. The first stage entailed the preparation of the rationale for and prototype units of population education to be included in the social studies textbooks for grade V, grade IX civics and general social studies for grade X. The second stage implemented a three month field test of these prototype units in selected schools and gathered feedback. Then there was a second field test of the revised prototype units. The fourth stage covered the preparation of the final drafts of the rationale and prototype units and the last stage was the report-preparation. *A Rationale for Population Education* and three prototype units based on the rationale for one subject matter of one grade in the elementary, middle and high schools were prepared.

Based on the findings, the following recommendations were proposed:

1. Emphasis should be placed on the importance of the problems caused by over population. Today these problems not only lie to considerable degree at the bottom of social problems in the Republic of Korea, but also constitute a factor creating continued rapid population growth. The essential point should be to diffuse population awareness among the students by emphasizing the fact that the expansion of population as compared with the land and its natural resources is a very great factor impeding national economic development. On the other hand, it should be noted that the objectives of each unit are to stimulate a rational way of thinking about family size and further to change values away from conventional individual views of children, rather than to advocate the practice of family planning.

2. The contents of each unit should be taught in relation to those of current social studies textbooks and curriculum by grade and school level and also on the basis of the Rationale for Population Education. Because the rationale shows the direction and scope of overall population education in the Republic of Korea, the instructional contents of each unit were based on it and organized in relation to the draft of the new revised curriculum in case of primary school and to current middle and high school curricula in case of secondary schools.

3. From the viewpoint of the importance of population education, the class hours allotted to each unit are appropriate. Each unit is assigned a larger block of time than any other field included in social studies and is regarded as a model of the important instructional contents to be dealt with.

4. As population education is still in the trial stage, with no generalization of the concept of the terms in use, especially of their subconcepts, there should be a serious discussion about key vocabulary terms in order to help the formation of the concepts and understandings amongst teacher.

Descriptors: *Instructional Materials Evaluation; Field Tests; Social Science Education; Secondary School Curriculum; Republic of Korea*

Source: Population Education Project
Korean Educational Development Institute
20-1 Umyeon-Dong
Gangnam-Gu, Seoul 135-00
Republic of Korea

STUDY TO SELECT AND ORGANIZE EDUCATIONAL TOPICS ON POPULATION EDUCATION

61

Central Education Research Institute. *Project in curriculum improvements for population education in the elementary and secondary schools of the Republic of Korea – the first stage final report.* Seoul, 1971. 119 p.

The research has been aimed at selecting and organizing educational topics concerning population problems that could be included in school education. In order to obtain the necessary basic data, a survey has been conducted among teachers and students on the extent of their knowledge and their attitudes toward population problems. Topics related to population problems contained in the existing school textbooks were also analysed. Some of the results of this survey and analysis follow:

1. While most teachers and students are aware of the seriousness of population problems, there are still a large number who do not consider population problems as "serious" or else maintain an indifferent attitude toward population problems. Teachers wishing to have more children have a small number of children or none at all at present and they point out that there is no guarantee that their present children will survive. They seem to hold the traditional ways of thinking as revealed by their preference for sons. The teacher respondents also: (a) considered family planning programmes as "the most reasonable method of population control" and population education as the next most reasonable method of population control; (b) believed that the family planning should be treated primarily in middle and high schools; (c) believed that the facts of population phenomena should be treated extensively in primary and middle schools; and (d) expressed the opinion that family planning methods should be treated in high and middle schools, and higher educational level. The majority of the teachers also believed that students are not as familiar with population problems as they should be. Finally, they stated that the most serious problem confronting them in teaching population problems is the lack of instructional materials.

2. The students, on the average, like having three to four brothers and sisters, and want to have about three children in the future. Like the teachers, the students want to have a nuclear family consisting of three children born at three-year intervals. The extent of knowledge about population problems on the part of both teachers and students was not as satisfactory as expected. It seems that their understanding of population problems is not based on good factual knowledge of population problems. Students in upper grades gave more accurate replies to questions concerning population problems than those in lower grades.

3. An analysis of the existing textbooks shows that topics concerning population problems occupy a relatively small portion (0.35 per cent) of all subject matter in school textbooks. More topics concerning population problems are included in textbooks for higher grades, and social studies textbooks contain the largest percentage of topics concerning population problems. The most popular topics are in

the category of "the facts of population phenomena." Concern for the quality of treatment of many population problems in textbooks is rather casual. Such casualness is greater in textbooks for lower grades, while topics on population problems are treated more systematically in textbooks for higher grades.

Based on these findings, the following four recommendations have been put forward (a) In order to allow for systematic treatment of population matters in school education, effective measures should be sought to include topics given in this report in school curricula and textbooks; (b) Attention to population problems should be expanded and strengthened in the course of pre-and in-service teacher training; (c) In order to ensure the effective implementation of education about population, supplementary instructional materials should be developed and supplied to teachers and students; and (d) Research should continue to be conducted in order that educational activities on population problems may be effectively carried out in the schools.

Descriptors: *Primary School Curriculum; Secondary School Curriculum; Content Analysis; Republic of Korea*

Source: Population Education Project
Korean-Educational Development Institute
20-1 Umyeon-Dong
Gangnam-Gu, Seoul 135-00
Republic of Korea

EXPERIMENT TO INTEGRATE POPULATION EDUCATION INTO SOCIAL STUDIES

62

Korean Educational Development Institute. *Curriculum development for population education: social studies in elementary and middle schools.* Seoul, 1974. 139p. (KEDI research report no. 10)

This study was undertaken to integrate population education concepts into the social studies curriculum of elementary and middle schools. To undertake this, KEDI first formulated the objectives for population education in elementary and middle school social studies and determined the scope and sequence. Based on this, materials were developed for grades IV to VI social studies in elementary school and grade V, III social studies in the middle school. The materials were trial tested in selected schools and evaluated for their effectiveness. The following recommendations were generated from the study:

Population education content must be systematically introduced into the social studies curriculum in the elementary and middle schools. Population is seen on movable axes perpendicular to each other. On the vertical axis, there is a time continuum of population facts from the past to the present and expectations for the future. Horizontally, population's relationship to economics, society, health, environment and education are represented at different points along the axis. Hence, the point where the axes cross would indicate the core population education content to be included in the social studies curriculum.

Teacher-training is urgently needed for the successful teaching-learning of Population Education in the school situation. To reach the ultimate goals of population education, school teachers, as pioneers in the local communities, have the responsibility of building a bridge between parents and students. To be taught in Population Education are population facts and problems created outside the students' homes. Also, ways for the students to

solve problems themselves at home must be taught. Therefore, only through effectively run teacher-training programmes can teachers come to grasp population knowledge wholly and feel confident in passing this on to their students.

To develop an independent Population Education course, there is an urgent need for pre-service teacher training. It is recommended that the students in the colleges of education and the liberal arts departments in universities should be able to take an independent course on population education. Junior and senior students in teacher's colleges and general college students who intend to go into the teaching profession at some time should be able to study systematically related contents of population since they will need to grasp these contents at each level of school, and in each grade and subject.

The methods and contents to be developed should be clear in the development of materials by grade. According to textbook analysis, population education content is included in the present textbooks, but require systematic arrangement and requires sequencing of the content by grades. The content of population education takes shape in grades I to IV elementary school social studies, but in grade V, only the problems of population drift and overpopulation are presented. In grade VI, only emigration abroad is treated.

In the middle schools, the number, distribution, density and composition of population is included in grade I; population migration in grade II; and most population education content equally in grade III. Therefore, it is difficult to expect effective results from population education without the support of other subjects, except for social studies.

Approaches to include population education in many other subjects in elementary and middle schools are necessary. Population education content needs to be integrated, particularly at the same grade level as in social studies the content is related to other subjects. For example, population migration treated in grade IV finds the related subject of ecological push-pull factors taught in science, and the formulas for determining such rates such as the population increase rate could be handled in arithmetic.

Descriptors: *Social Science Education; Primary School Curriculum; Secondary School Curriculum; Republic of Korea*

Source: Population Education Project
Korean Educational Development Institute
20-1 Umyeon-Dong
Gangnam-Gu, Seoul 135-00
Republic of Korea

VALIDATING THE EFFECTIVENESS AND RELEVANCY OF POPULATION EDUCATION CURRICULUM MATERIALS

63

Korean Educational Development Institute. *A study on the curriculum and instructional materials for population education in elementary and middle schools: summary report of the small-scale tryout.* Seoul, 1975. 54p. (KEDI research report no. 22).

This study was aimed at validating the relevancy and effects of a draft population education curriculum and materials in actual classroom instruction. It identified problems in applying the curriculum to classroom instruction, with special emphasis on content, time allotment, selection of related subject areas and instructional

process and obtained data which may be useful for improving the materials. The teaching/learning materials used in the trial instruction were both for teachers and pupils. The subjects involved in the tryout were social studies, Korean history, mathematics, physical education, and practical arts for grades IV, V and VI in the primary schools; and social studies, Korean history, mathematics, science, physical education and home economics for grade I, II and III in the middle schools. Pre-and post-tests were conducted to measure the extent to which the instructional objectives were attained.

The following are the findings of the study: (a) both teachers and students were relatively favourable and receptive to population education irrespective of school level but the trial instructions in population education failed to yield a satisfactory level in student achievement; (b) classroom observation revealed that while teachers were not making full use of the teachers' guide, there was no serious difficulty in learning the population content; (c) the following topics should be added: population policies in social studies, man and ecosystem in nature sex education in physical education and the parents views of children in practical arts; (d) the following topics should be deleted: human dignity and population in grade VI social studies, family size and clothing and family size and mothers' workloads in grade V; practical arts in primary school and food and nutrition in the middle school; (e) generally, the teachers found no serious problem with the time allotment for teaching population education; (f) none of the contents included in related subject areas were found to be unsuitable to the characteristics of their respective subject areas; (g) a sizeable portion of the teachers favoured incorporating population education into the existing curriculum, through the infusion approach. Based on these finding it was recommended that the number of subject areas into which population contents are infused be reduced and there be a more intensive coverage of the contents by a smaller number of areas; training seems to be one of the best ways to change awareness, knowledge and attitudes of teachers about population education; efforts should be made to avoid the permeation approach as much as possible as the unit approach appears to yield better effect into the middle and high schools than primary schools and in social studies, physical education, natural science and home economics; audio-visual materials bearing upon population education should be developed to improve the learning outcomes of population education; and efforts should be made to fully reflect regional disparities in the process of developing population education curriculum.

Descriptors: *Curriculum Evaluation; Content Analysis; Primary School Curriculum; Secondary School Curriculum; Instructional Materials Evaluation; Republic of Korea*

Source: Population Education Project
Korean Educational Development Institute
20-1 Umyeon-Dong
Gangnam-Gu, Seoul 135-00
Republic of Korea

SELECTING AND ORGANIZING CURRICULUM CONTENT FOR OUT-OF-SCHOOL POPULATION EDUCATION

64

Korean Institute for Research in the Behavioural Sciences. *Curriculum and material development for the adult education programme.* Seoul, 1977. 82 p.

This is a report of the results of a project undertaken to select and organize the curriculum content related to population problems and to develop the relevant materials. Specifically, the project: (a) established the general goals and the specific objectives which should be terminally reflected in population education programmes; (b) selected the content relevant to the population problems and organized it into various types of educational programmes; and lastly (c) conducted pilot studies to obtain the basic information necessary for further revision and modification of the programmes developed. After the project had identified the general objectives and content areas of an adult population education programme, the following printed materials were developed: booklets, charts, cartoons, dialogues and brochure. These materials were trial tested three times. The first tryout was administered on a group of mothers of the children attending a middle school in Seoul. It was found that many recipients could not understand what the instructors taught by means of the lecture method; lectures accompanied by audio-visual media were boresome to some adults; learners were interested in the topics about child rearing and education, rather than population problems; they showed interest in the lecture at first but their interest gradually decreased.

In the second tryout, the subjects were sampled from military groups. The results showed that: (a) the enlisted men has higher population consciousness than the officers; (b) change in attitude toward "daughter" occured among the officers, but not among the enlisted men; (c) change in attitude toward "having fewer children" was revealed among the enlisted men group but not among the officer group; (d) change in attitude toward "population growth" was revealed in the enlisted men, but not in the officer group; (c) the enlisted men showed their behavioural intention about contraception acceptance, while the officer group did not.

The final tryout was applied on unmarried female workers employed in a textile factory. The aims were to validate the curriculum and materials developed for population, to collect data for developing guidelines for leader instruction and personal self-learning and to determine the effectiveness of each material in the programme. The results of the study were: first, the booklet programme was effective in changing population consciousness, attitudes related to the population, and value of children. Secondly, the groups which were treated with the slides and chart showed little change in population consciousness, but made some changes in value of children and in ideal number of children. Thirdly, the groups with the drama and cartoon showed some changes in population consciousness, but almost no change in value of children related to the population problems. Fourth, every workers group showed no changes as far as contraception acceptance is concerned, but some changes occured in population consciousness and in value of children. Although, the adult population education programme thus developed has its own limitations in its effectiveness, it is the contention that the present project has attested that such an approach is effective in changing certain aspects of attitudes toward population and population-related issues.

Descriptors. *Curriculum Outline: Materials Preparation; Instructional Materials Evaluation; Adult Education; Republic of Korea*

Source: Korean Institute for Research in the Behavioural Sciences (KIRBS)
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Seoul, Republic of Korea

DETERMINING THE EXTENT OF INCORPORATION OF POPULATION EDUCATION INTO THE SCHOOL CURRICULA

65

Malaysia. Ministry of Education. Curriculum Development Centre. *An analysis of the extent of infusion and integration of population education into the school and teacher training curriculum; report.* Kuala Lumpur, 1983. 101 p.

The population education curriculum in Malaysia provides for a study of population characteristics with emphasis on the determinants and consequences of population growth in the family, community, nation and the world and which aims at developing in the students, rational and responsible attitudes and behaviour towards population situations. The three major areas of concerns in the population education curriculum are: (a) basic demographic concepts; (b) population situations; and (c) population issues. The three main concerns were organized into nine themes that recur at primary level, lower and upper secondary levels. These nine themes include (a) demographic concepts and processes; (b) determinants of population change; (c) population characteristics in Malaysia and other countries in the world; (d) population change and consequent demands for goods and services; (e) needs of a changing society; (f) population, resources and environment; (g) role of the individual and decision-making towards planning for the future; and (h) national and international population policies and programmes. In the existing primary curriculum, population education concepts were incorporated into science, history, civics, health science and geography from grades IV to VI. At the secondary level, population education concepts were incorporated into home science, health education, mathematics, geography, civics, general science, and biology. At the teacher training level, population concepts were introduced into health education and home science.

To determine the extent of incorporation of population education into the school curricula and teacher training curriculum, a content analysis was undertaken following three procedures: (a) identifying the materials where incorporation had taken place; (b) identifying topics in the syllabus and other materials where population concepts had been incorporated; and (c) assessing the coverage with regard to topics/concepts of population in terms of width and depth. The materials that were looked into were syllabuses, textbooks and teachers' guides. These materials were studied to identify the various areas in the materials where the population topics and concepts had been dealt with. The study presents the findings into three main categories. In the primary curriculum, the population topics that have been incorporated in the subjects are: (a) demographic concepts and processes; (b) population characteristics in Malaysia; (c) population change and consequent demands for goods and services; (d) needs of a changing society; (e) population resources and environment and; (f) role of individual in decision-making. Under the topic "demographic concepts and processes", the following concepts have been covered in human and environment, geography, science and civics: population size and

composition and population change. While the coverage on the topic "Population characteristics in Malaysia" is minimal, ample coverage has been made for the topic, "Population change and consequent demands for goods and services". The topic "Needs of a changing society" is least covered. The Human and environment subject provides a wide coverage of population-related topics. The treatment of the topics is mainly towards bringing about awareness and understanding of the factors or situation related to population.

In the secondary curriculum, out of the eight topics, seven have been identified as existing in home science, civics, health science, integrated science, mathematics at the secondary level and home science, civics, mathematics, general science and biology at upper secondary level. The topic that is not successfully incorporated is "Needs of a changing society". At the teacher training level, five out of eight topics of population were included in health education and home science. In the health programme, population concepts appeared under two broad objectives: (a) understanding concepts, principles and factors of health; and (b) understanding of the role of individual with regard to current issues. In home science, population concepts were successfully incorporated into four areas, namely; (a) the nature of family and family living; (b) management of family resources; (c) family health; and (d) food and nutrition. The scope of content however, has been limited to those aspects relating to health. Within these aspects, the population-related message have been adequately covered as well as given the appropriate approach and emphasis.

Descriptors: *Primary School Curriculum; Secondary School Curriculum; Teacher Education Curriculum; Curriculum Outline; Malaysia*

Source: Curriculum Development Centre
Ministry of Education
Pesiaran Duta
Kuala Lumpur 11-04
Malaysia

IDENTIFYING THE ROLE OF HOME ECONOMICS FOR PROMOTING POPULATION EDUCATION

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Manee Kuanpoonpol. *Home economics education and population education; a survey study in selected Asian countries.* Bangkok, Unesco Regional Office for Education in Asia and the Pacific, 1976. 163 p.

The study was undertaken to identify the role of home economics in school curricula for the development of population education; examine the home economics structure in Asia, particularly in relation to the total curriculum; and determine the composition of a strong home economics programme in relation to the particular educational system and nation and the quality of educational manpower. The respondents of the study included personnel of home economics programmes of nine countries – India, Indonesia, Iran, Malaysia, the Philippines, Republic of Korea, Singapore, Sri Lanka and Thailand. Data collection and analysis technique were undertaken through a survey of documents and materials available from the governments and international agencies including classroom materials and teacher notebooks; interviews with authorities in the countries; observation of classes in action; and observation of homes in urban and rural areas and out-of-school activities and programmes.

Several findings arose from the study:

In most countries, policy-makers and administrators appear to agree that home economics is a subject with which population education can be fused rather naturally. However, it should be remembered that home economics is usually compulsory in some countries for all girls, but not for boys. In some countries where work experience is a compulsory subject for all in elementary and lower secondary schools, there is an excellent opportunity to have home economics (work experience in the home) required of all children of both sexes.

Home economics in Asian countries is generally based on two different models. The earlier model relates home economics to the girl's and women's role in the home and tends to concentrate on skills in housework, cookery and needlework; the subject is meant only for girls. The newer model sees home economics as the whole integrated body of knowledge aiming at the quality of life and the well-being of the family. This model includes other skills, such as decision-making, problem-solving, managerial skills, and the sharing of responsibilities among members of the family. It tends to involve everyone in the family – male and female, adults and children.

Obviously, in the latter context home economics is more closely related to population education. Based on this model, population education concepts can be integrated very naturally in many topics from each of the various areas of home economics – food and nutrition, clothing, housing, home management, and family and child development.

Three countries under this study, the Republic of Korea, the Philippines and Thailand, have already integrated population education into various areas of home economics. India is preparing to do so.

Home economics is essentially a family-centred, skill-oriented, and decision-making subject. The learning experiences should be planned not only to foster knowledge, skills and attitudes, but also to focus on the family. When teaching-learning activities are focused on the family in a situation simulating reality, students can be guided to discover for themselves important issues related to family size.

The most frequently used instructional methods in Asian countries are the lecture and individual projects in needlework and handicrafts. Class discussion, group discussion, research and inquiry, and demonstration have been employed in teaching home economics with varying frequency. It is obvious that there is a need to improve the quality of teaching. Teacher training, both pre-service and in-service, should emphasize methodology – particularly a family-centred, skill-oriented and problem-solving approach – an approach which helps the learners to discover problems rooted in reality, to think about them, and try to solve them.

Textbooks, references, and other instructional aids, even teaching guides in home economics in national languages are scarce in many countries. An investment in reading materials, textbooks, and other instructional materials is as essential to home economics as other subjects.

More than half of the teachers teaching home economics in the lower levels, elementary and lower secondary schools, are insufficiently trained.

In some countries with advanced programme in home economics at the university level, the teacher training component in home economics seems to be less attractive and produce very few teachers.

Descriptors: *Curriculum Evaluation; Content Analysis; Home Economics Education; Asia*

Source: Population Education Clearing House
Unesco Regional Office for Education in Asia and the Pacific
P.O. Box 1425, General Post Office
Bangkok 10500, Thailand

DETERMINING WHAT PROPORTION OF CURRENT TEXTBOOKS HAVE BEEN DEVOTED TO POPULATION EDUCATION

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Philippines. Ministry of Education, Culture and Sports. Population Education Programme. *An analysis of the population content of current textbooks in the Philippine public elementary and secondary schools.* Manila, 1973. 22 p.

This study was undertaken to determine what proportion of current textbooks have been devoted to population content and to determine the manner in which the content has been treated; to provide information that would serve as baseline data for curriculum and textbook writers in preparing the scope and sequence of the curriculum and textbook content on population education by subject areas and school levels. Specifically, it sought to find out to what extent the topics in population education are included in the current textbooks and the topics and sub-topics are covered in each subject area and school level; if the population topics treated in each book are systematic, semi-systematic, casual or non-systematic; and if the presentation of the population topic is classified as pro-natal, anti-natal or neutral.

The 74 volumes that were analysed were drawn from the textbooks used in grades I and III for the primary level, grade V for the intermediate level and First and Third years for the secondary level. To collect data, every page of the current textbook was read. All the subject matter related to population education was identified, analysed and tallied. For quantitative analysis, the number of sentences devoted to population education were counted and converted to pages on the basis of the mean number of lines per page computed for every book. Qualitative population discussion in a specific text was rated as either pre-natal, anti-natal or neutral. The treatment of population content in a specific text was rated as 'systematic', 'semi-systematic', 'casual' or 'non-systematic' according to a four-point scale. The unit of analysis was the textbook or volume.

Descriptors: *Textbook Analysis; Content Analysis; Primary Grades; Secondary Grades; Philippines*

Source: Population Education Programme
Ministry of Education, Culture and Sports
Palacio del Governador on Aduana St.
Intramuros
Manila, Philippines

DESCRIPTIVE ANALYSIS USED FOR EVALUATING POPULATION EDUCATION SUB-UNITS

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Philippines. Ministry of Education, Culture and Sports. Population Education Programme. *Consultant's evaluation of population education sub-units.* Manila, 1973. 7 p.

This study was conducted to evaluate the population education sub-units in

health, home economics, mathematics, science and social studies in terms of the usefulness of the overview and objectives, contents and strategies, evaluation procedures, materials for reference, time allotment and style and format of the lessons. The respondents for this study were 22 subject specialists and experts selected from the Ministry of Education and universities and colleges to evaluate the materials. Data were collected by distributing the sub-units in different subjects to the selected consultants for their evaluation on the following aspects: usefulness of the overview and objectives, contents and strategies used, evaluation procedures, materials for reference, time allotment and style and format of the lessons. The sub-units were content analysed and evaluated using descriptive analysis.

Below are some of the selected findings as a result of the study:

A. *Home Economics*

1. Time allotment is too short to carry out the suggested activities.

2. Overview and objectives as a whole are useful, but the language should be made simpler. Difficult or new terms should be explained.

3. Classify objectives according to the three domains: cognitive, affective and psychomotor.

4. Include general objectives.

5. Present the content in more comprehensive, detailed outline form.

B. *Science*

1. Instructions should be detailed on:

   a) the use of the audio-visual materials,

   b) the performance of experiments,

   c) the use of background information for teachers.

2. Illustrations should be taken from the Medical Anatomy Book to make them accurate and simpler.

3. The sub-units should relate with other sub-units in other subjects. Should it make use of information taken up in a previous grade, then refer to it in the sub-unit, to assist teachers to tie up concepts.

4. Include information for teachers as appendices.

5. In citing sources, make use of scientific journals or books where the excerpts originated, to give it authority and credibility.

C. *Health*

1. There is no formal evaluation as it is built into the activities.

2. Health is closely linked with home economics and biology.

3. Some of the teaching aids may not be available in the field.

Suggestions offered:

a) Where references are not available, appendices and background information intended for teachers should be more comprehensive.

b) Include teacher observation of pupil activities and practices in evaluation.

4. Revise illustration carried in one sub-unit.

5. Give alternative activities for areas where suggested activity may not be feasible. The overview will be more useful for the teacher, if sub-headings are made for the purpose, content and methodology of the sub-unit. Give the teacher at one

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glance, cues on what the section offers, which may encourage him to read it thoroughly.

6. Children find the lesson very interesting. Furnish teachers with visual aids.

D. *Mathematics*

1. Update the data.

2. Start with Philippine data in any level, if available.

3. In making projections assume that events do not change.

4. Use also negative population growth.

5. Bring in population concepts in proper sequence.

6. Write the topics instead of the pages in the mathematics guide.

7. Place captions for figures.

8. The definition of population growth should be distinct from the natural increase.

Social studies

1. The usefulness of the overview and objectives.

   a) Overview

      i) Use of model may help the teacher see clearly the intent of the sub-unit.

      ii) Summary of teaching method should be given.

   b) Objectives

      i) Action words used for stating objectives behaviourally are not sufficiently varied.

      ii) Most specific objectives for each sub-unit are not subsumed under general objectives.

      iii) Most objectives are categorized.

      iv) Objectives should be developmental, culminating and valuing.

      v) Some objectives are too ambitious.

2. Whether the situations develop the process skill emphasized for the trade.

   a) Lacks models of inquiry that may help teachers structure the processing of content.

   b) Role-playing activity could better realize the objectives desired if model for role-playing is appended in the teacher's guide.

   c) Techniques of interviewing suggested by sociologists may enable the students to be more 'scientific' in their approach.

   d) Simulation games may be more made easier for the class to use if a model is followed.

   e) A more systematic evaluation of the student's acquisition of process skills is needed, otherwise it is difficult to have a basis for saying that the process skills have been developed.

   f) There should be a summing up, rounding up or generalization at the end of a lesson.

3. Whether activities lead to the attainment of objectives.

   a) The lesson activities and procedures do not seem to wind up explicitly with the attainment of

the generalizations envisioned for each sub-unit.

b) Only one sub-unit winds up with a statement of commitments.

c) Many of the teaching units do not have a well-designed evaluation to check whether the objectives set for the lesson have been attained.

d) Some of the tests only check the attainment of knowledge. They should also test understanding, abilities, attitudes and values.

e) Many of the activities tend to indoctrinate concepts of 'family control' and 'population control'.

f) Readings appear to be inadequate.

g) More explicit directions or explanations should be given in carrying out some of the activities.

h) Game in grade VI is too long and complicated.

4. Whether the facts are up-to-date and accurate.

a) Low level questions for evaluation.

b) One sub-unit is not explicitly designed to follow the conceptual approach.

c) Storytelling by the teacher is frowned upon by some in social studies education.

5. Whether the ideas are clear.

a) Statement of related ideas may be improved.

b) Some sub-generalizations do not seem to reflect the generalization.

6. Whether parts of the sub-units are controversial.

a) Comparison of large and small families appear to be biased in favour of small families.

b) Large families are pictured as undesirable.

7. Others

a) Lacks value judgements.

b) Concentrates too much on the number of children.

c) Time allotment is not realistic.

d) Content is relevant.

e) Content is too heavy.

f) Approach is simple and to the point.

g) Approach is technical.

h) Most situations and values are middle-class.

Descriptors: *Instructional Materials Evaluation; Content Analysis; Philippines*

Source: Population Education Program
Ministry of Education, Culture and Sports
Palacio del Governador on Aduana St.
Intramuros
Manila, Philippines

ASCERTAINING THE QUALITY OF POPULATION EDUCATION CONTENTS IN THE TEXTBOOK

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Taninta Buacharoon. *An analysis of textbooks concerning ideas towards population.* Bangkok, Population Education

Project, Mahidol University, 1975. 40 p. (Research report paper No. 15)

The study was undertaken to (a) examine the quality of population education content by topic and sub-topic as integrated in various textbooks used in elementary and secondary schools; ascertain the quality of the population content by: (i) identifying the content as being simple or complex; (ii) identifying the treatment of the content as being systematic, casual, wrong or outdated; and (iii) determining whether ideas on fertility and rural/urban migration are supporting, opposing or neutral; (c) identify any outstanding passages. The sample used were 389 selected commonly used textbooks in elementary and secondary schools. Data were collected through content analysis. Specifically, population content was: (i) counted for number of sentences; (ii) identified as being a particular topic and sub-topic of the population content; (iii) identified as being systematic or casual or wrong; (iv) identified as being simple or complex; (v) (if fertility or migration) identified as being supporting or opposing or neutral. The tabulation sheets were then combined by subject and grade and population sentences were then converted into population pages.

The findings showed the following:

1. Out of 389 textbooks (60,361 pages) only 120 volumes (about one-third) include some population discussions.

2. Most population content was found under the sub-topic 'demographic factors and data' of the topic 'Population Study'. Ideas on 'fertility' and 'study and understanding of population situations and problems and ways of solving problems' were rarely discussed. The presentation of population content emphasizes facts rather than problems.

3. Social studies contained most population content followed far behind by natural sciences.

4. Two-thirds of the content was simple and casual (that means that passage was concerned with only one or a few of the components of a study of population). Virtually all of the remainder was 'simple' and 'systematic'.

5. From the entire survey, only two passages were judged to be exceptionally good, comprising a systematic treatment of complex content. Although they were from two different subjects, both covered the same topics, the relationship between population growth and natural resources.

Descriptors: *Textbook Analysis; Content Analysis; Primary Grades; Secondary Grades; Thailand*

Source: The Mahidol University
Population Education Programme (MPEP)
Faculty of Social Sciences and Humanities
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DETERMINING THE APPROPRIATENESS OF POPULATION EDUCATION UNIT FOR CLASSROOM IMPLEMENTATION

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Weerapol Sararattana. *Expectations of educators in Ubonratchathani upon the implementation of population education unit of the B.E. 2521 primary school curriculum.* M. Ed. thesis, Mahidol

University, 1982. 143 p. Unpublished. In Thai with English abstract.

The study was conducted for the following reasons: (a) to determine whether the population education unit, with regard to learning objective, concept or principle, and content in the B.E. 2521 primary school curriculum was appropriate for classroom implementation; (b) to compare the expectations of curriculum administrators, academic personnel or curriculum supervisors, and teachers in the primary education level, on the implementation of the population education curriculum with respect to their immediate role; (c) based on their recommendations, undertake an improvement of the population education unit.

The respondents of the study were 145 curriculum administrators, 65 academic personnel or curriculum supervisors and 125 teachers in Ubon Ratchathani. The results of the study showed the following:

1. A high percentage of educators in the three groups agreed that the learning objectives, concept of principles, and content of the population education unit were highly appropriate for classroom implementation.

2. When the research compared the expectations among three groups of educators, there were statistically significant differences in the learning objective section but not in the concept or principle and content sections.

3. Learning objective setting.

   a) Certain objectives should give more emphasis to the locality and provincial levels than the national level with regard to the numeration of population unit and population change in the curriculum;

   b) Objectives should be more precisely and clearly stated;

   c) They should not only be limited to memory or recall ability but also include some other cognitive abilities;

   d) Criteria should also be added in the objective section so that it will be readily used in evaluating teaching.

4. Concept or principle setting.

   a) Concepts or principles should give more stress to causes and consequences of population change in the community and provincial levels;

   b) The wording in this section should be more clearly and precisely defined for better understanding;

   c) Stated concepts or principles should follow the 'shared problem solving method';

   d) Concepts or principles should be presented in short and precise statements.

5. Content setting.

   a) Content should be limited to the family community and provincial rather than the national level;

   b) More issues including details should be added;

   c) Population education training on content and teaching method should be given more emphasis for the teacher;

   d) Content and issues should be frequently updated.

Curriculum development in population education

Descriptors: *Curriculum Evaluation; Primary School Curriculum; Thailand*

Source: The Mahidol University
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